Introduction
A fire is the uncontrolled combustion of combustible material, generating thermal energy (heat), light (flame) and smoke (collection of very small solid and liquid particles), gas and vapours. It is an ever present hazard at the University and continued vigilance is required to prevent ignition, to maintain the fire precautions provided for effective means of escape from fire, and to provide the means to extinguish fires should they occur.

Fires at work have three main causes:

- They are started deliberately;
- They occur because people are not alert to fire hazards;
- They occur because people are careless of fire hazards.

Purpose

Definitions

Responsibilities

Procedures

EOHS 02-001 Fire Safety and Fire Prevention Procedures

1. The following are recommended Fire Prevention measures.
   a. Naked light and smoking is prohibited in the following areas:
      (1) in the vicinity of Petroleum, Oil and Lubricants points
      (2) in the vicinity of Cylinders containing combustible gases
      (3) in the vicinity of any unit containing combustible fluids
      (4) in any area containing official University records
      (5) in any area designated as Laboratories
      (6) in any area designated as a Library
      (7) in any area designated as a Museum
      (8) in all areas designated as Lecture Rooms/Theatres
      (9) in any area deemed by the Head of Department to be regarded as such.

   b. Signs reading “No Smoking or Naked Light” are to be posted within the appropriate buildings and in the vicinity of areas containing combustible materials.

   c. No smoking whilst in bed.
d. The addition of any electrical appliance to the University’s Electrical System may only be done with the written consent of the Estate Manager.

e. Electrical faults are to be reported to the Customer Services area at the Maintenance Services Department.

f. Tampering with electrical fittings is forbidden.

g. Private contractors may not interface with the institutions power supply system without written permission from the Estate Manager.

h. Cigarettes and matches are to be fully extinguished before being discarded.

j. Where smoking is allowed, Departments are responsible for providing suitable receptacles for matches and cigarettes.

k. Fires will not be lit anywhere on campus other than in properly authorised places, such as cooking facilities, Laboratories and Incinerators.

l. Skips and other refuse receptacles will not be set alight.

m. Smoke Alarms/Detectors should not be tampered with.

n. Each functional area shall nominate a Safety and Emergency Management Liaison.

o. Where installed, checks are to be made by your Safety and Emergency Management Liaison on a monthly basis to confirm serviceability of smoke alarms.

p. Fire extinguishers are to be appropriately allocated based on the potential threat in the particular area.

q. Documents held in paper form and sensitive electronic equipment should be protected by “clean agent” suppressant systems, that will not cause them any damage.

r. Strict inventory control must be maintained on a room by room basis in the event of the need for loss recovery.

s. It is the responsibility of your Safety and Emergency Management Liaison to inspect and see to the serviceability of the Fire Extinguishers within your area.

t. On inspecting the extinguisher, the Officer is required to affix his/her signature to the Inspection Card (which is attached to the equipment). The signature must be done in blue or black ink.

u. Where Fire Hoses are provided it is the responsibility of your Safety and Emergency Management Liaison to inspect and see to the serviceability of the
said hose. There is likewise, a requirement for the Liaison to affix his/her signature in blue/black ink.

v. Annually, a certifying body will visit and conduct inspection of all Fire Equipment. They will certify the equipment using red ink.

w. Safety and Emergency Management Liaisons are required to submit monthly returns to the office with responsibility for safety and emergency management by the 7th day of the month succeeding the one been reported on.

x. Fire Fighting Equipment are not to be used for any other purpose than for that which it was originally intended.

y. Social activities to be held on University property, which will involve the use of Electricity and/or naked flames and/or Petroleum, Oil and Lubricants, must be cleared by the Estate Manager, prior to submission to the institution’s Administration.

z. Official University records maintained in paper form are to be stored in the approved Fire Proof Cabinets/Vaults.

aa. Critical Information Technology related files, are to be “backed-up” on a regular basis/or as your work volume dictates.

ab. Information Technology files, deemed as being critical, are to be stored in Fire Proof Cabinets/Vaults on/off campus in keeping with University of the West Indies (Mona) security guidelines.

ac. Fire Proof Cabinets/Vaults are to be held at strategic points on/off campus in keeping with University of the West Indies (Mona) security guidelines.

ad. The maintenance and servicing of all Fire Safety Equipment on the institutions property shall be the responsibility of the office with responsibility for safety and emergency management.

ae. Fire Drills are to be conducted as outlined below:

- Faculties: a minimum of one (1) per Semester
- Departments: a minimum of one (1) per Semester
- Halls of Residence: a minimum of two (2) per Semester

af. Deans, Heads of Department, and the Director of Student Services and Development are responsible for initiating these drills as appropriate. The Principal may call a Drill at his/her discretion.

ag. Annex ‘A’ to these instructions is to be submitted to the Principal copied to the office with responsibility for safety and emergency management.
Identification of Fire Hazards

For a fire to start, three things are needed:
• A source of ignition;
• Fuel; and
• Oxygen.

If any one of these is missing, a fire cannot start. Taking measures to avoid the three coming together will therefore reduce the chances of a fire occurring.

The University shall do its best to identify potential ignition sources on the Universities’ premises by looking for possible sources of heat which could get hot enough to ignite material found. These sources could include:

- Smokers’ material, e.g. cigarettes, matches and lighters;
- Naked flames, e.g. gas or liquid-fuelled open-flame equipment;
- Sparks from burning products, e.g. bonfires in yards;
- Vehicle exhausts;
- Electrical, gas or oil-fired heaters (fixed or portable), room heaters;
- Hot processes/hot work, e.g. welding by contractors or shrink wrapping;
- Cooking equipment, hot ducting, flues and filters;
- Extract fans for dust and fume removal systems, e.g. by build-up of debris;
- Failure of temperature control thermostats on hot work/cooking processes;
- Heat sources, such as gas, electric, microwaves, radio frequency, thermal fluids;
- Steam pipes;
- Frictional generated heat from mechanical equipment;
- Static charge from mechanical equipment, e.g. conveyor belts;
- Poor electrical installations, e.g. overloads, heating from bunched cables, damaged cable;
- Faulty or misused electrical equipment, e.g. refrigeration defrost systems, fork lift
- Truck charging units;
- Light fittings and lighting equipment, e.g. halogen lamps or display lighting or overhead lights too close to stored products;
- Hot surfaces and obstruction of equipment ventilation;
- Spontaneous ignition and self heating, e.g. oil soaked rags, paint scrapings, crumb and batter residue; and
- Arson.

Indications of ‘near-misses’, such as scorch marks on furniture or fittings, discoloured or charred electrical plugs and sockets, cigarette burns, etc., can help you identify hazards which you may not otherwise notice.

Anything that burns is fuel for a fire. The University shall look for things that will burn reasonably easily and are in enough quantity to provide fuel for a fire or cause it to spread to another fuel source. Some of the most common ‘fuels’ found on the University premises are:

- flammable liquid-based products, such as paints, varnishes, thinners and adhesives;
- flammable liquids and solvents, such as petrol, white spirit, methylated spirit,
- cooking oils and disposable cigarette lighters;
• flammable chemicals, such as certain cleaning products, photocopier chemicals and dry cleaning products that use hydrocarbon solvents;
• flammable gases such as liquefied petroleum gas (LPG), flammable refrigerants and flammable gas propelled aerosols;
• stored goods and high piled or racked storage;
• foodstuffs containing sugar and oils, such as sugar-coated cereal and butter;
• plastics and rubber, such as video tapes, polyurethane foam-filled furniture and polystyrene-based display materials;
• paper products, such as stationery, advertising material and decorations;
• packaging materials;
• plastic and timber storage aids both in use and idle, such as pallets, octobins, and palletainers;
• combustible insulation, such as panels constructed with combustible cores;
• textiles and soft furnishings, such as hanging curtains and clothing displays; and
• waste products, particularly finely divided items such as shredded paper and wood shavings, off cuts, dust and litter/rubbish.

The University shall also consider the materials used to line walls and ceilings, e.g. polystyrene or carpet tiles, the fixtures and fittings, and how they might contribute to the spread of fire.

The main source of oxygen for a fire is in the air around us. In an enclosed building this is provided by the ventilation system in use. This generally falls into one of two categories: natural airflow through doors, windows and other openings; or mechanical air conditioning systems and air handling systems. In many buildings there will be a combination of systems, which will be capable of introducing/extracting air to and from the building. The University shall look for additional sources of oxygen materials used or stored at premises such as:
• some chemicals (oxidising materials), which can provide a fire with additional oxygen and so help it burn. These chemicals should be identified on their container (and Material safety data sheet,) by the manufacturer or supplier who can advise as to their safe use and storage;
• oxygen supplies from cylinder storage and piped systems, e.g. oxygen used in welding processes;

Identification of Persons at Risk

The University shall do as reasonable possible to identify persons at risk especially those:
• employees who work alone, e.g. cleaners, security staff;
• people who are in isolated areas, e.g. maintenance staff, staff on cranes, reach trucks and cat walks;
• unaccompanied children and young persons;
• people who are unfamiliar with the premises, e.g. seasonal workers, contractors, visitors and customers;
• people with disabilities or those who may have some other reason for not being able to leave the premises quickly;
• people with language difficulties; and
• people in the immediate vicinity of the premises
EVALUATE, REDUCE, REMOVE AND PROTECT FROM RISK

The University shall look critically at its premises and try to identify any accidents waiting to happen and any acts or omissions which might allow a fire to start. Also the University will look for any situation that may present an opportunity for an arsonist.

EOHS 02-002 Flammable and Combustible Liquids

A liquid having a flash point below 100°F (38°C) and a vapor pressure not exceeding 40 psi at 100°F (thus excluding liquefied petroleum gases, liquefied natural gases and liquefied hydrogen). Flammable liquids can give off large volumes of flammable vapours at room temperature. These vapors, when mixed with air, can ignite, often violently. Spilled flammable liquids can, if not contained, flow a long way to an ignition source, and then flash back to the source of the leak. Spills on clothing can represent a serious risk of injury if ignited. To help control these risks:

- store flammable liquids in a separate storage area, or in a purpose-made bin or cupboard;
- dispense and use them in a safe place where there is good ventilation and no source of ignition;
- keep containers closed when not in use. If possible, use safety containers which have self-closing lids;
- dispense liquids over a tray and keep some non-flammable absorbent material handy to mop up spills;
- dispose of contaminated materials safely or call in disposal experts.
- In the work or store room, up to 50 litres may be stored in a fire-resisting cabinet or bin that will not contain any leaks (see Figures 15 and 16). Quantities greater than 50 litres should be stored in a dedicated highly flammable liquids store.

- For all areas using flammable or combustible liquids, CO2 fire extinguishers should be located within a 50 ft. travel distance.
- Eliminate or exclude all sources of ignition within use and storage areas for flammable and combustible liquids.
- Spark-proof tools should be used to eliminate friction sparks made by metal striking metal contact.
- Oil or solvent soaked wiping clothes, rags or waste must be stored in an approved metal container with a self closing lid. The containers should be provided with an orange chemical waste sticker identifying the contents of the container (e.g. “Oil Soaked Rags”)
- Users of flammable or combustible liquid should maintain absorbent material to control spills.

EOHS 02-003 Flammable Gases
A great variety of compressed gases in cylinders are stored and handled in University laboratories and in other University operations such as cutting, welding, and outdoor cooking. The use of compressed gas has the potential to introduce hazards of fire and explosion, increased rates of combustion, exothermic reactions, or serious interference with manual firefighting efforts depending on the characteristics and properties of the specific gases.

Escape of flammable compressed gases due to failure of equipment, human failure, premature operation of safety relief devices, or rupture of cylinders exposed to fires in other materials has caused severe fires and explosions. Since the gases are contained in heavy, highly pressurized metal containers, the large amount of potential energy resulting from compression of the gas, makes the cylinder a potential rocket or have the potential to violently rupture into fragments.

General Guidelines for Flammable Gases

The volume of flammable gas shall be kept to the minimum necessary for the work being done. Just in time delivery should be used where possible.

The following are requirements for outdoor storage of flammable gas:

The cylinders should not be stored within 10 ft of windows, doors, or other openings nor shall they be stored within 50 ft of ventilation intakes. Storage areas shall be kept clear of dry vegetation and combustible materials for a minimum distance of 15 ft.

- Cylinders stored outside shall not be placed on the ground (earth) or on surfaces where water can accumulate.
- Storage areas shall be provided with physical protection from vehicle damage.
- Storage areas shall be permitted to be covered with canopies of noncombustible construction.
- All compressed gas cylinders shall be stored in an upright position.
- All flammable gas cylinders, full or empty, shall be handled in the same manner. Store empty cylinders separately from full cylinders.
- Compressed flammable gas cylinders, whether full or partially full, shall not be exposed to or heated by devices that could raise the temperatures above 125°F (52°C).
- Always use non-sparking tools on compressed gas cylinders.
- Static-producing equipment located in flammable gas areas shall be grounded.
- Signs should be posted in areas containing flammable gases communicating that smoking or the use of open flame, or both, is prohibited within 25 ft of the storage or use area perimeter.
- Compressed flammable gas cylinders should not be placed where they could become a part of an electrical circuit.
- Compressed flammable gas cylinders shall not be exposed to dampness, salt, corrosive chemicals or fumes that could damage the cylinders or valve-protective caps.
- Leaking damaged, or corroded compressed flammable gas cylinders should be removed from service.
EOHS 02-004 Combustible Metals

- The amount of combustible metal shall be kept to the minimum necessary for the work being done.
- Combustible metals should be segregated and stored separately from incompatible materials such as water, acids, halogens, oils, and ordinary combustibles (paper, cardboard, etc).
- Where possible, combustible metals should not be exposed to sources of heat, open flames or sparks.
- The following safeguards should be applied to water reactive metals (sodium, potassium, magnesium):
  - They should be stored in cabinets in order to minimize exposure to water spray, pooling or drainage from sources such as sprinklers, domestic water, or process water lines or systems.
  - Ensure that the preparation area is completely dry of pooled water or any moisture.
  - Any tools such as knives (when cutting metals such as sodium), tongs or other equipment used to handle or process the metals should also be kept free of water and moisture.
  - Excess metal chips, fines, ribbons or other leftover pieces from processes should be immediately collected and properly stored or disposed of in accordance with the University’s chemical waste program to minimize additional hazards or possible exposures.
  - In order to prevent alkali metals from reacting with water during storage, handling or other usage, the metal shall be immersed in kerosene or mineral oil within a noncombustible, sealed container.
  - When using metals such as sodium for solvent purification, the solvent stills should be:
    - Kept in the fume hood at all times.
    - Clearly labeled to identify the contents of each still.
  - Class D type fire extinguisher shall be provided by and funded by the user in areas storing, handling or using combustible metals. Materials such as dry sand, clay or other dry, inert materials should also be available to help smother a potential combustible metal fire. **DO NOT** use water, carbon dioxide, AFFF foam or multi-purpose (ABC) type fire extinguishers on combustible metal fires.

EOHS 02-005 Fire and Emergency Evacuation

**IN THE EVENT OF A FIRE**
Here we will examine how to address fires under three (3) circumstances.

**General**

1. On the discovery of any fire the following basic procedures will be followed:

   - Activate the building's alarm system and notify the Jamaica Fire Brigade.
   - Assist persons in immediate danger and those incapable of exiting on their own.
   - Attempt to extinguish the fire if doing so does not put you in any danger.
   - Evacuate the building;
   - Report to the assembly point;
   - Do not re-enter the building until informed it is safe to do so.

**Small Fires**

2. A fire which is detected by any of the electronic sensors will automatically set off the Fire Alarm.
3. An individual detecting a fire should use every possible means to raise an alarm. This could include shouting FIRE! FIRE! FIRE! and/or activating the electronic alarm system using a Pull Station.
4. Call the Jamaica Fire Brigade.
5. If you have caught the fire in its “INFANT” stage, bring your compressed Fire Extinguisher and or Fire Hose Reel into action. Care must be taken to ensure that water is not used to extinguish fires believed to be associated with electrical equipment.

**Large Fires**

6. If upon the discovery of the fire it is already too large or it appear to have the potential of becoming larger, then the following approach shall be taken:

   - A fire which is detected by any of the electronic sensors will automatically set off the Fire Alarm.
   - An individual detecting a fire should use every possible means to raise an alarm. This could include shouting FIRE! FIRE! FIRE! and/or activating the electronic alarm system using a Pull Station.
7. Call the Jamaica Fire Brigade.
   - EMERGENCY 110.

(If you have a restricted telephone, report the incident to the Telephone Exchange – '0'.)
8. WHERE POSSIBLE;
- Shut down critical operating equipment.
- Close windows and doors.
- Turn off electricity supply.
- Shut down Air conditioning systems

9. EVACUATE the facility using the designated exits
10. Subsequently make contact with the following –
    - The office with responsibility for safety and emergency management
    - Mona Police/Campus Security

11. On receipt of the information at the Office of Safety and Emergency Management the following persons will be informed.
    - Principal
    - Dean of the Faculty involved/Head of the Department involved
    - Director of Student Services (if Students are involved)
    - Estate Manager

EMERGENCY MANAGEMENT

GENERAL

1. The office with responsibility for safety and emergency management will dispatch person(s) to the scene to co-ordinate the effort.

2. On receipt of the information at the Mona Police/Campus Security, personnel will immediately be dispatched to the scene, to carry out the following functions:
   - To as far as possible ensure that the building is vacated.
   - To form a cordon around the area to keep onlookers safe and from hindering the fire fighting effort.

3. The Campus Security will be responsible for escorting the Fire Fighting equipment to the scene of the fire.

4. The Campus Security will deny access to the incident area to unauthorized vehicles and personnel while ensuring unrestricted access to emergency vehicles.

5. On arrival the Jamaica Fire Brigade will take the lead in bringing the situation under control.
THE EVACUATION

ON THE SOUND OF THE ALARM

When an alarm is raised, or you are directed to evacuate the facility, the following are the basic procedures to be followed:

1. Provide assistance to persons incapable of exiting on their own.
2. Leave the building in an orderly manner, using the safest/nearest exit.
3. Move purposefully to the nearest/designated Assembly Point.
4. Wait for a head count to be conducted.
5. Follow the directives of the Emergency Personnel

Refer to section EOHS Section VIII Emergency Management for further information on Emergency Evacuation

The following are attached for your benefit:
Annex “B” – Detailed Emergency Evacuation Checklist for All
Annex “C” – Detailed Emergency Evacuation Checklist for Safety Liaisons
Annex “D” – A list showing the designated Assembly Areas on the Campus.

THE RECOVERY

2. The recovery process will depend on the nature and extent of the damage caused by the incident. Below are guidelines for the recovery process.

   a. Unless instructed by the Jamaica Fire Brigade no one is to be permitted to enter the site of the fire.

   b. Jamaica Constabulary Force/Campus Security is to prevent persons from entering the area.

   c. Where there is the possibility for looting the Jamaica Constabulary Force/Campus Security should take the necessary precautions to prevent this happening.

   d. The area shall remain sterile until instructed otherwise by the Jamaica Fire Brigade.
e. The maintenance services through it's agents shall implement a Loss Assessment Programme.

f. The Bursary through it's agents shall implement a Loss Recovery Programme.

g. The department with responsibility for the affected area shall activate their Business Continuity Plans.

h. Annex ‘A’ is to be submitted to the Principal, copied to the office with responsibility for safety and emergency management within twenty-four (24) hours of the occurrence.