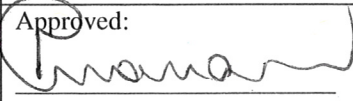
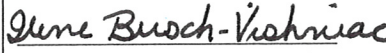
 McMaster University Risk Management Manual	RMM # 325 Title: Process and Equipment Purchases and/or Modifications		Date: May 2011 Page: 1 of 8
	Submitted: Risk Management Support Group	Approved:  Vice President, Administration	Authorized:  <i>Acting</i> President and Vice-Chancellor

1 PURPOSE

- 1.1 To ensure that any goods purchased are assessed for existing or potential hazards and ensuring that appropriate controls are put in place. This procedure also applies to any modifications of existing processes or equipment.

2 SCOPE


- 2.1 All faculty, staff, students, volunteers and contractors involved in activities at any location approved by McMaster University.

3 RELATED DOCUMENTS

- 3.1 Occupational Health and Safety Act and Regulations (OHSA) R.S.O. 1990
- 3.2 McMaster University Workplace and Environmental Health and Safety Policy, RMM #100
- 3.3 Ontario Fire Code, O. Reg. 213/07
- 3.4 McMaster University Risk Management System, RMM # 101
- 3.5 Occupational Health and Safety Act (OHSA) R.S.O. 1990, RMM # 102
- 3.6 Standard Operating Procedures (SOP) Program, RMM # 301
- 3.7 Electrical Safety Program, RMM # 316
- 3.8 Safety Audits and Inspections Program, RMM # 302
- 3.9 CSA Standards (Electrical, Machine Guarding)

4 DEFINITIONS

- 4.1 **due diligence** - a general duty to take every precaution reasonable in the circumstances to protect health and safety; a defense if charged with a breach of legal duty.
- 4.2 **external responsibility system** - the system of government audit, inspection and enforcement of health and safety and the functioning of the internal responsibility system.
- 4.3 **internal responsibility system** - the system of identification, analysis and resolution of occupational health and safety issues that is shared by all parties in the workplace.
- 4.4 **lost time injury** - an occupational injury that results in a worker being away from work for more than the day of the injury.
- 4.5 **supervisor** - person who has charge of a workplace or authority over a worker.
- 4.6 **worker** - person who performs work or supplies services for monetary compensation.
- 4.7 **workplace** - any land, premises, location or thing at, upon, in or near which a worker works.

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4.8 **major hazard** - any activity or biological, physical or chemical hazard that has the potential to cause death, critical injury or a lost time injury.

4.9 Acronyms:

- **CJHSC** - Central Joint Health and Safety Committee
- **EOHSS** - Environmental and Occupational Health Support Services
- **FHSc** - Faculty of Health Sciences Safety Office
- **IRS** - Internal Responsibility System
- **OHSA** - Occupational Health and Safety Act
- **RMM** - Risk Management Manual
- **RMSG** - Risk Management Support Group

5 RESPONSIBILITIES

5.1 Role of Supervisors (Academic and Administrative):


Supervisors shall:

- Ensure that all purchases be in compliance with the Occupational Health and Safety Act and the Regulations that apply to the workplace;
- Ensure that equipment purchased, made or modified within the workplace has been approved by the Canadian Standards Association or other recognized associations such as Hydro, UL, and/or any Federal or Provincial requirements;
- When considering a process or equipment purchase take into consideration regulatory compliance and industry standard safety practices at the design stage, in the purchase specifications, during construction and /or installation phases;
- Review new/modified main activities to determine if hazards exist. If a hazard exists, controls shall be developed and implemented;
- When a major hazard exists, train workers who will be exposed while working with the new/modified equipment/process on the Standard Operating Procedures;
- Complete a pre-start health and safety review as per Section 7 of the Regulations for Industrial Establishments if required. (See Appendix A);
- Implement a pre-use checklist if the equipment fits the criteria of the Safety Audits and Inspections Program, RMM# 302; and
- Ensure that any small appliances purchased (eg. but not limited to: kettles, space heaters, toasters, microwaves) used in the workplace have an automatic shut off mechanism (Appendix B).

5.2 Role of Workers:

Workers shall:

- Work in compliance with OHSA
 - Observe relevant sections of the regulations (See Appendix A) that apply in their workplace;
 - Follow McMaster University health and safety policy, programs and procedures that are relevant to their work environment;
 - Complete the pre-use checklists if required;
 - Work in a manner that eliminates risk to their health and/or safety; and
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- Only use personal appliances that conform to the requirements of this Program (see Appendix B).

5.3 **Role of Purchasing Resources:**

Purchasing Resources shall:

- Ensure that all new purchases as processed by this department meet all appropriate legislation and industry standards ie. Canadian Standards Association.

5.4 **Role of Central Joint Health and Safety Committee:**

The CJHSC shall:

- Review this program on a regular basis

5.5 **Role of Joint Health and Safety Committees:**

The JHSCs shall:

- Review the Standard Operating Procedures for the new/modified equipment to make recommendations before the equipment is in use.


5.6 **Role of Environmental and Occupational Health Support Services and the Faculty of Health Science Safety Office:**

These offices shall:

- Provide the technical and professional support required to facilitate compliance with this program, the OHS Act and regulations made under the Act.

5.7 **Records**

- Supervisors will retain copies of all task specific SOP's and training records (RMM Program # 301).
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Appendix A
Industrial Regulations Section 7

PRE-START HEALTH AND SAFETY REVIEWS

7. (1) In this section,

“apparatus” means equipment or a machine or device;

“protective element” means a shield, a guard, an operating control acting as a guard, a locking device or any other device preventing access;

“spray booth” means a spray booth as defined in Ontario Regulation 388/97 made under the *Fire Protection and Prevention Act, 1997*;

“Table” means the Table to this section. O. Reg. 528/00, s. 2.

(2) Subject to subsections (5), (7), (8) and (9), a pre-start health and safety review is required if, in a factory other than a logging operation, a provision of this Regulation listed in the Table applies and the circumstances described in the Table will exist,


- (a) because a new apparatus, structure or protective element is to be constructed, added or installed or a new process is to be used; or
- (b) because an existing apparatus, structure, protective element or process is to be modified and one of the following steps must be taken to obtain compliance with the applicable provision:
 - 1. New or modified engineering controls are used.
 - 2. Other new or modified measures are used.
 - 3. A combination of new, existing or modified engineering controls and other new or modified measures is used. O. Reg. 528/00, s. 2.

(3) When a pre-start health and safety review is required, the owner, lessee or employer shall ensure that the apparatus, structure or protective element is not operated or used or that the process is not used, as the case may be, unless the review has been conducted, and,

- (a) all measures identified in the review as being required for compliance with the relevant provisions of this Regulation that are listed in the Table have been taken; or
- (b) if some or all of the measures specified in clause (a) are not taken, the owner, lessee or employer has provided written notice to the joint health and safety committee or the health and safety representative, if any, of what measures have been taken to comply with the relevant provisions of this Regulation that are listed in the Table. O. Reg. 528/00, s. 2.

(4) A pre-start health and safety review includes the preparation of a written report that is made to the owner, lessee or employer and contains,

- (a) details of the measures to be taken for compliance with the relevant provisions of this Regulation that are listed in the Table;
 - (b) if testing is required before the apparatus or structure can be operated or used or before the process can be used, details of measures to protect the health and safety of workers that are to be taken before the testing is carried out; and
 - (c) if item 3 or 7 of the Table applies, details of the structural adequacy of the apparatus or structure. O. Reg. 528/00, s. 2.
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- (5) When item 2 of the Table applies, a pre-start health and safety review is not required if,
- (a) the protective element was installed at the time the apparatus was manufactured and the conditions set out in paragraphs 1, 2 and 3 of subsection (6) are met; or
 - (b) the protective element was not installed at the time the apparatus was manufactured and the conditions set out in paragraphs 1, 2, 3 and 4 of subsection (6) are met. O. Reg. 528/00, s. 2.
- (6) The following are the conditions mentioned in clauses (5) (a) and (b):
1. The apparatus was manufactured in accordance with and meets current applicable standards, or it has been modified to meet current applicable standards.
 2. The apparatus is installed in accordance with the manufacturer's instructions and current applicable standards.
 3. The protective element was manufactured in accordance with and meets current applicable standards, or it has been modified to meet current applicable standards.
 4. The protective element is installed in accordance with the manufacturer's instructions, and current applicable standards, if any. O. Reg. 528/00, s. 2.
- (7) When item 3 of the Table applies, a pre-start health and safety review is not required if the rack or stacking structure is designed and tested for use in accordance with current applicable standards. O. Reg. 528/00, s. 2.
- (8) When item 4 of the Table applies, a pre-start health and safety review is not required if the process is conducted inside a spray booth that is manufactured and installed in accordance with current applicable standards. O. Reg. 528/00, s. 2.
- (9) When item 7 of the Table applies, a pre-start health and safety review is not required,
- (a) in the case of a lifting device or travelling crane, if it is in or on a supporting structure originally designed for it and its capacity does not exceed the capacity provided for in that original design;
 - (b) in the case of an automobile hoist, if it is certified that it meets current applicable standards. O. Reg. 528/00, s. 2.
- (10) If no pre-start health and safety review is required because subsection (5), (7), (8) or (9) applies, the owner, lessee or employer shall keep documents establishing the exemption readily accessible in the workplace for as long as the protective element, rack or stacking structure or lifting device, travelling crane or automobile hoist remains in the workplace or the process is used in the workplace, as the case may be. O. Reg. 528/00, s. 2.
- (11) A pre-start health and safety review required under item 1, 2, 3, 4, 5, 6 or 7 of the Table shall be conducted by a professional engineer. O. Reg. 528/00, s. 2.
- (12) A pre-start health and safety review required under item 8 of the Table shall be conducted by a professional engineer or by a person who in the opinion of the owner, lessee or employer possesses special expert or professional knowledge or qualifications appropriate to assess any potential or actual hazards. O. Reg. 528/00, s. 2.
- (13) The person conducting a pre-start health and safety review shall,
- (a) date and sign the written report mentioned in subsection (4);
 - (b) if the person is a professional engineer, affix his or her seal to the report; and
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- (c) if the person is not a professional engineer, include in the report details of his or her special expert or professional knowledge or qualifications. O. Reg. 528/00, s. 2.
 - (14) Reports of pre-start health and safety reviews conducted under this section shall,
 - (a) be kept readily accessible in the workplace together with any supporting documents; and
 - (b) be provided to the joint health and safety committee or the health and safety representative, if any, before the apparatus, structure or protective element is operated or used or the process is used. O. Reg. 528/00, s. 2.
 - (15) Documents kept under subsection (10) may be reviewed, on request, by,
 - (a) the joint health and safety committee or the health and safety representative, if any; or
 - (b) an inspector. O. Reg. 528/00, s. 2.
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TABLE

	Applicable provisions of this Regulation	Circumstances
1.	Subsections 22 (1), (2) and (4)	Flammable liquids are located or dispensed in a building, room or area.
2.	Sections 24, 25, 26, 28, 31 and 32	Any of the following are used as protective elements in connection with an apparatus:
		1. Safeguarding devices that signal the apparatus to stop, including but not limited to safety light curtains and screens, area scanning safeguarding systems, radio frequency systems and capacitance safeguarding systems, safety mat systems, two-hand control systems, two-hand tripping systems and single or multiple beam systems.
		2. Barrier guards that use interlocking mechanical or electrical safeguarding devices.
3.	Clause 45 (b)	Material, articles or things are placed or stored on a structure that is a rack or stacking structure.
4.	Section 63	A process involves a risk of ignition or explosion that creates a condition of imminent hazard to a person's health or safety.
5.	Section 65	The use of a dust collector involves a risk of ignition or explosion that creates a condition of imminent hazard to a person's health or safety.
6.	Sections 87.3, 87.4, 87.5 and 88, subsections 90 (1), (2) and (3), and sections 91, 92, 94, 95, 96, 99, 101 and 102	A factory produces aluminum or steel or is a foundry that melts material or handles molten material.
7.	Sections 51 and 53	The construction, addition, installation or modification relates to a lifting device, travelling crane or automobile hoist.
8.	Sections 127 and 128	A process uses or produces a substance that may result in the exposure of a worker in excess of any occupational exposure limit set out in Regulation 833, 835, 836, 837, 839, 840, 841, 842, 843, 844, 845 or 846 of the Revised Regulations of Ontario, 1990 or in Ontario Regulation 278/05.

O. Reg. 528/00, s. 2; O. Reg. 280/05, s. 1.



Appendix B
CSA/UL only

Appliance	Minimum Safety Requirement
Kettle	Automatic Shut Off
Coffee Maker	Automatic Shut Off
Fan	Blade Protection, Timer
Space Heater	Shut Off Features (tip, covering, etc)
Irons	Automatic Shut Off
