Occupational Health and Safety Program Manual

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Office of the Chief Risk Officer

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Contents

Version Control Table

Version Number	Owner	Approver	Change Summary	Status
1	OCRO	OCRO	New	N/A

1. Document Overview

Purpose and scope of document

The Occupational Health and Safety Program Manual (hereafter known as "the manual") outlines mandatory requirements at the University of Ottawa (hereafter uOttawa) for the management of occupational health and safety (OHS), specifically for key risk areas. This establishes the minimum requirements and considerations for the relevant stakeholders based on functional needs.

The manual applies to work performed at uOttawa or under the supervision or control of a uOttawa worker. The manual defines the responsibilities and expectations for all uOttawa workers.

Terms and definitions

Refer to the OHS glossary for the OHS terms and definitions that apply to documents within the management system.

Responsibilities

Responsibilities for several roles at uOttawa are detailed in Administrative Procedure 14-1 (Internal Responsibility Procedure for Health and Safety Issues).

Reference procedures

We have developed reference procedures to assist in implementing the requirements defined within this and other program manuals. Faculties and services shall adopt the procedures listed below to comply with requirements or shall develop their own procedures that meet or exceed these requirements.

- Confined Space Entry
- Electrical Safety
- Fieldwork Safety
- Hazard Identification and Risk Assessment
- Hazardous Material and Waste Management
- Incident Management
- Mobile Equipment
- Pregnant Workers
- Working Alone
- Working at Heights
- Laboratory Materials and Equipment
- Laboratory Decommissioning

The entire OHS Management System can be found on the Office of the Chief Risk Officer website.

2. Hazard Identification Risk Assessment (HIRA)

Supervisors of projects or workspaces at uOttawa shall, as a minimum, follow the assessment procedure defined in the Hazard Identification and Risk Assessment Procedure or meet the applicable regulatory standards, whichever are more stringent.

The work performed shall meet (as a minimum but shall not be limited to) the following requirements:

1. Supervisors of projects or in workspaces shall conduct a Hazard Identification Risk Assessment (HIRA) prior to the initiation of work.

2. Supervisors of longer-term projects and workspaces shall continue to conduct the assessment when there is a significant change to the scope of the project changes or every six (6) months.

3. Job safety shall be evaluated using this assessment every year or whenever a new process or position is created.

4. Assessments shall include all of the following aspects:
   - Hazard identification
   - Hazard elimination
   - Risk analysis
   - Risk evaluation
   - Risk control

5. Risk assessments shall be documented and retained for a period of three (3) years in a central location, accessible by faculties, services, and central administration, for review or assurance purposes.

6. As soon as a major hazard (i.e., posing an extreme risk) is identified, it shall immediately be escalated to the supervisor as well as the applicable HSRM and/or the OCRO for further support and consideration.

3. Incident Management

Persons working on projects or in workspaces at uOttawa where an accident or incident occurs shall follow, as a minimum, the procedure defined in the OHS Incident Management Procedure and applicable regulatory standards. Stakeholders shall be informed of the incident and the incident shall be **formally** reported.

All incidents that occur shall meet (as a minimum but shall not be limited to) the following requirements:

1. **All accidents and incidents shall be reported to the work supervisor immediately.**

2. Affected individuals shall be attended to if they require medical assistance.

3. An Accident/Incident Report shall be completed as soon as possible, or within 24 hours, by the worker's supervisor and the worker involved (with support from applicable OHS personnel) to ensure that the investigation is documented as accurately as possible.

4. Investigations shall be performed by people trained and competent in uOttawa incident investigation processes.

5. An Accident/Incident Report and investigation shall be completed for incidents and near misses, and for accidents requiring first aid or with a high potential for injury, damage, or any other consequence.

6. All incident reports shall identify appropriate corrective actions to eliminate or effectively mitigate the risk or root cause that contributed to the occurrence of the incident based on the investigation findings.

7. All incidents in which a worker is killed or critically injured shall have a designated member of the Joint OHS committee included in the investigation; all incident details will be treated as confidential and privileged.

8. Depending on the determined risk level of the incident, the details may need to be shared or reviewed with other interested or relevant parties.

4. Personal Protective Equipment

Persons working on projects or in workspaces at uOttawa where personal protective equipment (PPE) is required and used shall follow, as a minimum, the processes specified for the respective activity and applicable regulatory standards, whichever are more stringent.

The work performed shall meet (as a minimum but shall not be limited to) the following requirements:

1. Work conducted at uOttawa shall use the Hazard Identification Risk Assessment (HIRA) process to conduct a comprehensive risk assessment and determine PPE requirements.

2. Those responsible for selecting PPE shall do so on the basis of an evaluation of the PPE performance characteristics required for the task, the conditions present, the duration of use, and the hazards and potential hazards identified in the risk assessment. Those responsible for selecting PPE shall strive to avoid the introduction of additional hazards to the individual or workplace (e.g., static that creates a source of ignition, disposable garments that create a fire hazard, potential allergic reactions, etc.).

3. Supervisors of projects and workspaces shall provide necessary PPE for workers, students and visitors, or shall direct personnel to places where they can obtain the necessary PPE.

4. Supervisors of projects and workspaces shall ensure that the required PPE is worn according to manufacturer's instructions, is appropriate to the individual having to wear the device, and fits properly. PPE shall not be altered or modified.

5. Supervisors of projects shall have a mechanism(s) in place to ensure that non-workers comply with uOttawa PPE requirements.

6. Supervisors of projects shall establish PPE inspection criteria and PPE shall be inspected prior to use.

7. PPE shall be maintained, serviced, cleaned, and stored in accordance with the manufacturer's requirements.

8. PPE shall be removed from service and replaced when deemed defective and in accordance with manufacturer recommendations and/or government regulations.

9. Where appropriate, PPE may be repaired and/or serviced by a qualified individual and returned to service.

5. Specific Safety Guidance

Working at heights

Personnel working on projects or in workspaces at uOttawa in which elevated work is involved shall follow (as a minimum but shall not be limited to) the processes defined in the Working at Heights Procedure and applicable regulatory standards, whichever are more stringent.

The work performed shall meet (as a minimum but shall not be limited to) the following requirements:

1. Supervisors of projects and workspaces at uOttawa shall use the Hazard Identification Risk Assessment (HIRA) process to conduct a comprehensive risk assessment to determine current and potential elevated workspaces.

2. The workspaces and hazards thus identified shall be evaluated for fall prevention and protection requirements. Deficiencies identified through initial and ongoing risk assessments shall be prioritized and appropriately addressed. Each fall area shall be engineered to support the mandatory fall protection systems, which as a minimum shall meet the fall protection system or device requirements for:

    - Specifications and purchase
    - Usage
    - Maintenance
    - Storage
    - Decommissioning

3. The risk assessments and fall protection requirements thus identified shall be documented and communicated to the appropriate parties.

Electrical safety

Persons working on projects or in workspaces at uOttawa in which electrical work (or work with equipment that poses a high risk) is involved shall follow, as a minimum, the processes defined in the Electrical Safety Procedure and applicable regulatory standards, whichever are more stringent.

The work performed shall meet (as a minimum but shall not be limited to) the following requirements:

1. Supervisors of projects and workspaces shall conduct a risk assessment to determine critical electrical considerations. The risk assessment shall follow the Hazard Identification Risk Assessment (HIRA) process and shall consider:
    - The environment in which the electrical equipment is being used, including consideration of location, moisture levels, spacing, lighting, and nearby hazards
    - The condition of the electrical equipment in use

2. Following the risk assessment, electrical items and related activities shall be logged and reviewed at regular intervals as specified in the Electrical Safety Procedure. This includes a review of requirements, such as that:

- the electrical equipment is suitable for use and certified by the appropriate certifying organization
- the operating procedures are up-to-date and appropriate for working conditions
- the appropriate PPE is used if and when work on live circuits is required
- the proper electrical equipment is used when it is located outdoors
- the equipment is inspected for damage and repaired when necessary

3. Personnel connecting, maintaining, or modifying electrical equipment or installations shall hold the appropriate certificate of qualification or permit as outlined by regulatory requirements.

Field work safety

Supervisors of projects and of activities that require field work shall follow, as a minimum, the processes defined in the Field Work Safety Procedure and applicable regulatory standards, whichever are more stringent. Field work is defined as any organized and authorized research or educational activities conducted outside the geographical boundaries of uOttawa by members of the University.

The work performed shall meet (as a minimum but shall not be limited to) the following requirements:

1. Supervisors of projects and field work shall use the Hazard Identification Risk Assessment (HIRA) process to conduct a comprehensive risk assessment prior to initiating field work.

2. Project personnel shall assess the field work team to ensure that they have right capabilities and competency to conduct the intended tasks, including formal documentation. Participants with medical needs may be referred to medical specialists (e.g., Health and Wellness, the individual's primary care physician, etc.) to discuss specific needs or accommodations for the field work.

3. Project personnel shall conduct an orientation session for field work participants to inform them of the field work's goals, challenges, minimum requirements, associated risks, precautionary actions, local laws and customs, and emergency procedures.

4. Project personnel shall provide the necessary training and documentation, notably for equipment and emergencies, to all field work participants.

5. Project personnel shall follow uOttawa OHS requirements and those of any organizations involved in field operations. Where there is conflict, the more stringent requirements shall prevail.

6. Project personnel shall maintain a proper ratio of participant(s) to supervisor(s) as outlined in the Field Work Safety Procedure.

7. Project personnel shall ensure there is communication with the applicable HSRM (or OCRO, if the organizational unit does not have an HSRM) and the International Office (as applicable) to ensure proper insurance coverage, account for OHS considerations, as well as institutional international travel requirements.

Confined space entry

Persons working on projects or uOttawa workspaces that feature confined spaces shall follow, as a minimum, the processes specified in the Confined Space Entry Procedure and applicable regulatory standards, whichever are more stringent.

The work performed shall meet (as a minimum but shall not be limited to) the following requirements:

1. Supervisors of projects and workspaces at uOttawa shall use the Hazard Identification Risk Assessment (HIRA) process to conduct a comprehensive risk assessment to identify and develop a documented inventory of confined spaces.

2. Assessments shall be carried out by a competent person(s), and the inventory shall be reviewed annually and revised whenever a new confined space is added or changes to existing confined spaces, or to the work carried out within them, are made.

3. Once identified, an assessment shall be conducted to determine whether the space meets the criteria for a confined space.

4. Supervisors of projects and workspaces at uOttawa shall have mechanisms in place to re-classify confined spaces, as necessary.

5. Supervisors of projects and workspaces at uOttawa shall post a sign at, or near, entrances to each confined space.

Pregnant workers

Persons working on projects or in workspaces at uOttawa that present an elevated risk to pregnant workers shall follow, as a minimum, the processes defined in the Pregnant Workers Procedure and applicable regulatory standards, whichever are more stringent.

OHS committees

OHS Committees are structured to ensure that health and safety is discussed, reviewed and improved at a University-wide level. OHS committees, including the Biosafety Committee and the Radiation and Laser Safety Committee, shall comply with the guidance specified in their terms of reference and applicable regulatory standards, whichever are more stringent.

OHS committees shall meet (as a minimum but shall not be limited to) the following requirements:

1. OHS committee members shall adequately represent parts of the university.

2. OHS committees shall be composed of a minimum of four (4) members, with no more than half representing managerial functions and the balance representing regularly employed workers who do not exercise managerial functions and are selected by the workforce.

3. Maintain proper documentation of membership, meetings, and communication of issues discussed.

4. Conduct adequate inspections of all University workspaces and grounds by at least one (1) designated worker member monthly such that the entire campus is inspected annually.

Additional information regarding OHS committees, including committee structure, worker representation and member count, membership, meetings, roles, and responsibilities is detailed in the Occupational Health and Safety Committee Management document and the applicable terms of reference.

OHS document management and control

Documents contained within the OHS Management System are developed in accordance with the document hierarchy (refer to Figure 1). Documents that are created as an output from the management system (i.e., work aids within operating units) shall be maintained as evidence of compliance with, or implementation of, the requirements of the management system. These may include, but are not limited to, the following documents:

- Inspection records
- Hazard identification and risk assessment forms
- Incident investigation records
- Training records
- Management review outputs
- Work permits
- Contract job records
- Audit reports

Document management and control within the OHS Management System shall ensure:

1. Proper document numbering.

2. Complete logging of document ownership, approvals, and revisions.

3. Correct formatting and filing of documents within the OHS Management System.

4. Accessible document filing, making sure that documents and data are available in locations where operations essential to the OHS Management System are performed.

5. Identification and control of external documents and their distribution.

6. Removal and archiving of obsolete documents and data at points of issue and use to ensure that such documents are protected against unintended use and are retained for legal use and knowledge preservation purposes.

7. Documents such as work aids, in general, shall be maintained for a period of three (3) years and shall be available to present during regular reviews or assurance activities.

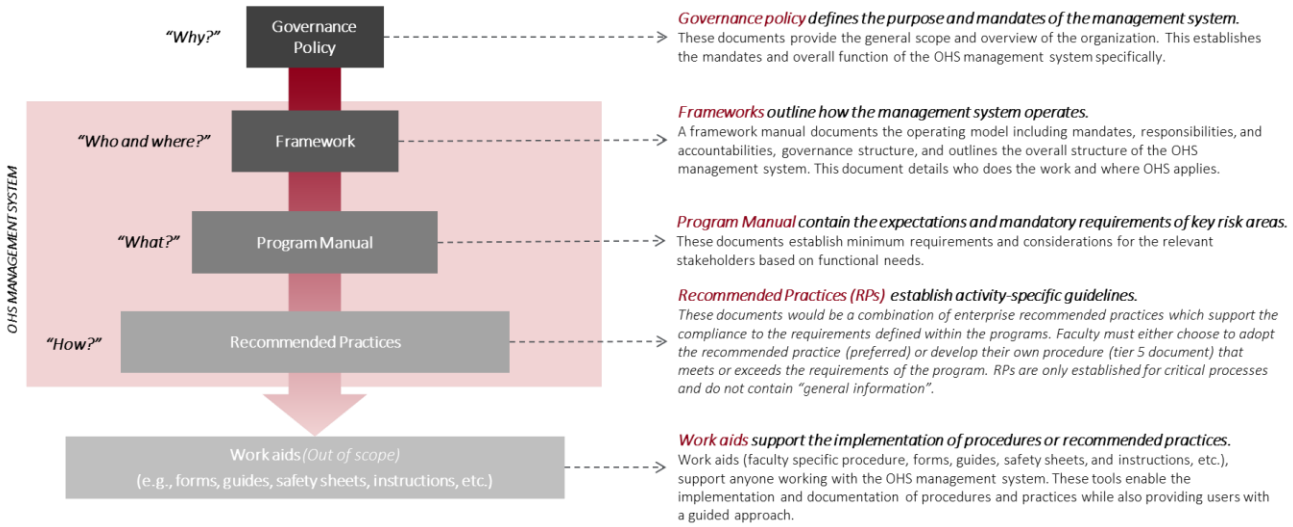

Figure 1. OHSMS Document Hierarchy

6. Competence Framework and Training

Supervisors of projects and workspaces where activities at uOttawa take place shall provide stakeholders (including uOttawa workers) with all necessary training, knowledge, tools, and equipment they need to be competent and fully equipped to carry out their respective tasks.

For work performed at the University, the responsible supervisor shall:

1. Determine the necessary competence of workers that affects or could affect the University's OHS performance.

2. Ensure that workers are competent (including their ability to identify hazards) based on appropriate education, training, and experience.

3. Where applicable, take actions to ensure that workers acquire and maintain the necessary competence, and evaluate the effectiveness of the actions taken.

4. Retain appropriate documentation as evidence of competence.

Workers conducting work at the University are responsible for refusing work they are not competent or adequately prepared to perform.

7. Performance Evaluation

Monitoring and measurement

Once a year, organizational units performing activities at uOttawa shall comprehensively monitor and measure different performance requirements to assess the effectiveness of the OHS Management System implementation within the unit. The monitoring and measurement process is also initiated when a new performance requirement is identified. The identification of new performance requirements may arise due to the outcomes of different avenues, including:

- Management reviews
- OHS committee meetings
- Incident investigations
- New OHS initiatives

Performance evaluation monitoring and measurement shall meet (as a minimum but shall not be limited to) the following requirements:

1. Organizational units shall regularly review OHS risks and opportunities to identify and create procedures for measuring a new performance requirement.

2. Organizational units shall conduct the measuring process regularly and report the results to the OCRO.

3. Organizational units shall analyze and evaluate the results of the measurement to identify actions for improvement.

4. If action is required, organizational units shall establish the improvement actions to implement.

5. If escalation is required, organizational units shall escalate to senior management and/or executive management and OCRO (as needed).

6. Organizational units shall continue to monitor and evaluate their OHS performance, including monitoring for compliance with regulatory requirements.

Inspections

Organizational units performing activities at uOttawa shall conduct, document, implement, and maintain a planned inspection program that complies with the minimum requirements within this program manual, as well as more detailed inspection requirements contained within supporting procedures.

The planned inspection program shall address (as a minimum but shall not be limited to) the following activities:

- Training of individuals involved
- Scheduling
- Execution
- Prioritization of findings and creation of action plans
- Follow up

The program of general and specialized inspections aims to identify:

- Potential environmental, health, and safety hazards and issues
- Equipment and building deficiencies
- Improper procedures and non-compliance with procedures
- Effects of change
- Inadequate control measures

Inspection Types

There are two types of inspections that units shall conduct to identify the hazards and risks that require improvement or corrective action:

- **General planned inspections** involve a review of general building and workspace conditions and practices; they aim to identify readily identifiable hazards and non-compliance with uOttawa requirements and regulatory standards. Here are some examples of general planned inspections:
  - Laboratory inspections
  - Biosafety inspections
  - Radiation inspections

- **Specialized planned inspections** are required to ensure critical equipment and safety devices are inspected in accordance with uOttawa and regulatory requirements. Here are some examples of specialized planned inspections:
  - Mobile equipment inspections
  - Emergency equipment inspections
  - First aid equipment inspections
  - Fall protection systems and devices inspections
  - Fire protection equipment inspections

Specific details and requirements for inspections, including their planning, scheduling, and frequency, and the roles, responsibilities, training, and follow-up related to them, are outlined in the uOttawa OHS Management System Program Manuals and Procedures.

Assurance

As illustrated below, organizational units at uOttawa shall regularly and comprehensively conduct assurance activities as described in the three lines of defence model.

1st Line of Defence	2nd Line of Defence	3rd Line of Defence
Organizational Units/Functions	**Operational Risk Management**	**Internal Audit**
Management (process owners) are primarily responsible for owning and managing risks associated with day-to-day operational activities. First-line units are also responsible for designing, operating, and implementing controls.	The second line assists in identifying emerging risks in daily operation of the business. It does this by providing compliance and oversight in the form of frameworks, policies, tools, and techniques to support risk and compliance management.	The third-line function provides objective and independent assurance. While the third line is responsible for assessing whether the first and second line functions are operating effectively, it also has a duty to report to the board and audit committee, in addition to providing assurance to regulators and external auditors that the design and operation of the control culture across the organization is effective.

This program will be implemented by (as a minimum but not limited to these actions):

- Training the individuals involved
- Scheduling assurance activities within the different organizational units
- Executing assurance activities
- Prioritizing findings and establishing action plans
- Following up on actions and sharing information with relevant parties

Management review

Senior management within each organizational unit performing activities at uOttawa shall conduct management reviews to assess any opportunities for improvement and any necessary changes in the external and internal issues affecting the OHS Management System. This includes the degree to which the organizational unit has met the OHS policy and OHS objectives.

The management review shall meet (as a minimum but shall not be limited to) the following requirements:

1. Organizational units shall establish a frequency and structure within the unit for performing a management review at least annually.

2. Organizational units shall evaluate the effectiveness of the OHS management system within the unit. This may include the identification, mitigation and elimination of risks, assurance protocols, corrective actions, results of investigations and inspections, and much more.

3. Organizational units shall ensure that the relevant parties are aware of expectations and can contribute to the management review.

4. Organizational units shall schedule and conduct reviews regularly, with active participation from relevant parties (i.e., at least 80% senior management).

5. Organizational units shall complete the management review by issuing identified and documented outputs.

6. Organizational units shall escalate any major concerns to the OCRO for support.

7. Organizational units shall share lessons learned and actions with other stakeholders, as needed.

8. Organizational units shall maintain records of management reviews for at least three (3) years.

8. Procurement and Management

As a minimum, the procurement and management of materials and equipment at the University shall reference and follow the requirements and procedures defined by and managed through Procurement. This is in addition to the proper operation, inspection, maintenance, storage, transfer, and decommissioning as defined by the manufacturer.

The procurement and management of materials shall meet (as a minimum but shall not be limited to) the following requirements:

1. Equipment and material purchases shall consider the health and safety impact of the item; a risk assessment shall be conducted to determine the level of risk involved and how the risk shall be managed, reduced or eliminated.

2. Upon receipt of the item, a pre-start health and safety review must be conducted for applicable equipment. Refer to the applicable regulations for guidance and information on the requirement for a pre-start health and safety review.

Equipment

Persons working on projects or in workspaces at uOttawa that involve equipment (including mobile equipment) shall follow, as a minimum, the requirements defined by and managed through Procurement and the Mobile Equipment Management Procedure or applicable regulatory standards, whichever are more stringent. This is in addition to the proper operation, inspection, maintenance, storage, transfer, and decommissioning as defined by the manufacturer.

The work performed shall meet (as a minimum but shall not be limited to) the following requirements:

1. Conduct a hazard identification risk assessment of new equipment and of updated or modified equipment every year for monitoring and maintenance purposes.

2. Ensure that equipment users are, or will be, appropriately trained.

3. Ensure that pre-use safety inspections are conducted before the equipment is used and that unsafe items and conditions are addressed immediately.

4. Document all training, inspections, and maintenance.

Hazardous material and waste management

Persons working on projects or in workspaces at uOttawa that involve hazardous materials shall follow, as a minimum, the procedures defined in the Hazardous Material and Waste Management Procedure and applicable regulatory standards, whichever are more stringent. Moreover, when dealing with biological or radioactive materials, such persons shall also comply with the procedures established as part of the Biosafety Manual and Radiation Safety Manual.

The work performed shall meet (as a minimum but shall not be limited to) the following requirements:

1. Conduct a hazard identification risk assessment based on the Hazard Identification Risk Assessment Procedure.

2. Comply with the Hazardous Material and Waste Management Procedure for the entire lifecycle of the hazardous material.

3. Approve, document, and review any inventory of hazardous substances, including storage locations and approved quantity limits or typical quantities stored by location.

4. When procuring any hazardous materials, ensure that approval from a supervisor is received prior to the purchase or to creation of a purchase order.

5. Establish and maintain labeling for containers and distribution systems for hazardous substances, ensuring that labels appropriately communicate hazards.

6. Ensure that hazardous materials that are stored, used, or produced have a Safety Data Sheet (SDS).

7. Monitor and communicate potential workplace exposures to hazardous substances, with controls defined and used to mitigate unacceptable exposures.

8. Provide proper training for personnel working with hazardous material, including refresher training conducted periodically (at least once every three years is recommended).

9. Audits and inspections shall be conducted at a regular cadence defined by the Hazardous Material and Waste Management Procedure.

10. Contractors shall adhere to the requirements established as defined in their relationships with the University.

Designated substance management

Supervisors of projects or workspaces performing activities at uOttawa that involve designated substances shall follow, as a minimum, the assessment procedure defined in the Hazardous Material and Waste Management Procedure and applicable regulatory standards. Certain exemptions exist for the procedure, as listed in the *Designated Substances Regulation*, but the procedure applies to most designated substances found in workplaces on campus.

The work performed shall meet (as a minimum but shall not be limited to) the following requirements:

1. A hazard identification risk assessment that complies with the associated Hazard Identification Risk Assessment Procedure shall be conducted when a designated substance(s) is identified.

2. Supervisors working with and managing the designated substance shall conduct periodic assessments annually or whenever a process change may have occurred.

3. Supervisors are also responsible for providing workers and any persons working with the substance with information and training on the hazards of the designated substance(s), including precautions and control measures for safe handling, storage, and disposal of the substance(s).

4. Management of designated substances includes the acquisition, handling, storage, removal, and disposal of a designated substance on the premises of the University of Ottawa. Stakeholders shall comply with the provisions of the procedure, use necessary work and hygiene practices, and follow any exposure control protocols.

5. Controls shall also be evaluated and applied, with complete documentation considering:
    - Monitoring needs
    - Exposure evaluation and records, along with minimum exposure levels as reference

- Medical monitoring, including necessary medical assessments, periodic examinations, and health education

9. Emergency Response

Supervisors of projects or workspaces who conduct activities at uOttawa shall, as a minimum, reference and follow the requirements and procedures defined in uOttawa's emergency plan/information or regulatory standards, whichever are more stringent.