

# UNIVERSITY OF TORONTO

MOULD CONTROL PROGRAM

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#### **1.0 INTRODUCTION**

Mould is a microscopic organism that can be found growing on water damaged materials or in areas with high humidity. Most common types of mould are not hazardous to healthy individuals. However, mould may be hazardous to susceptible individuals such as people who have compromised immune systems, atopic individuals with existing allergies, children and the elderly. To prevent potentially hazardous exposure to mould at the University by employees, students, visitors and external contractors, proper control measures must be implemented.

#### **Objectives:**

The objectives of the Mould Control Program are:

- 1) To protect the University community from the potential health risks associated with exposure to mould contamination;
- 2) To provide a safe and healthy work and study environment for employees, students, contractors and visitors, in accordance with the University's Health and Safety Policy; and
- 3) To comply with the general duty clauses (Sections 23, 25(2)(h)and 27) under the Occupational Health and Safety Act of Ontario.

#### Program Elements:

The basic elements of the mould control program are:

- 1) Prevention of mould growth;
- 2) Ongoing surveillance for mould growth;
- 3) Identification and reporting of mould contaminated material;
- 4) Identification and reporting of water episodes (leaks, spills, seepage, flooding, etc.);
- 5) Training and education of workers who may come into contact with mould contaminated material;
- Provision of appropriate procedures for all mould remediation work, and classification of such work as Level I, II, III, IVa and IVb according to the University of Toronto Procedures for Remediation of Fungi in Indoor Environments;
- 7) Control and monitoring of University employees and external contractors performing mould remediation work;
- 8) Review this program at least every 5 years; and,
- 9) Communication of this program and of mould related work taking place in University buildings to joint health and safety committees and to other persons who may be affected by the work.

#### <u>Scope</u>

This program applies to all buildings and structures owned or leased by the University of Toronto, to all employees and students of the University and to occupants of University buildings who may be exposed to mould in University buildings.

# 2.0 BACKGROUND AND DEFINITIONS

# 2.1 Background

Mould is a naturally-occurring organism that is abundant in the natural world. As a result, mould spores are always present in buildings. They can be carried indoors by the wind, insects, in dirt, on clothing or by ventilation equipment. Mould presents a problem when it starts growing in indoor environments. Mould growth indoors can occur when spores on susceptible building materials become wet long enough to allow the spores to germinate, grow and multiply. Common sites for mould growth in buildings include:

- Drywall
- Wood
- Ceiling tiles
- Pipe Wrap
- Organic carpet backing
- Cardboard, building paper
- Soil in crawlspaces
- Soil in carpets

In workplaces where there are no mould amplification sites, mould exposure would not be expected to present a health hazard except to susceptible individuals. In situations where indoor mould amplification sites are present, the risk of exposure to mould increases. The factors influencing the risk from mould exposure include personal susceptibility, age, state of health and route of exposure. The potential health effects of mould exposure also depend on the amount and duration of exposure, and the species of mould.

The health effects of inhaling mould spores include:

- Allergic reactions
- Infectious diseases
- Toxic and irritation effects

The greatest potential exposure to mould occurs during the remediation of mould contaminated material. During remediation, the mould is disturbed, releasing a large number of spores as well as other parts of the mould organisms into the surrounding air. In order to prevent the exposure of individuals to high levels of airborne mould, proper precautions and safe work procedures must be implemented whenever mould remediation work is being performed.

#### 2.2 Definitions

#### **Amplification Site**

Refers to a location, which due to a suitable nutrient base and water content, is fostering fungal growth.

#### Fungi Kingdom

Classification of living matter that is separate from the Plant Kingdom and Animal Kingdom. The Fungi Kingdom includes spore-bearing organisms, such as mushrooms, moulds and yeasts.

#### High Efficiency Particulate Air (HEPA) Filter

A specialized filter capable of removing 99.97% of particulates 0.3 micrometers in diameter and greater.

#### Heating, Ventilation, and Air Conditioning (HVAC) System

HVAC system refers to the equipment and distribution system used for heating, ventilating, cooling, humidifying, dehumidifying, and cleansing air for a building zone for the purpose of comfort, safety and health of the occupants.

#### Mould

Moulds are microscopic organisms, part of the Fungi Kingdom of living matter, most of which reproduce through production of massive numbers of spores. Most moulds need moisture to grow and will grow on any organic material (drywall, ceiling tiles, wood, paper, backing on carpet etc.).

#### Mould Remediation

Treatment of mould contamination either by cleaning or by removal of the contaminated materials.

#### 3.0 RESPONSIBILITIES

This section outlines the responsibilities within the University for implementation of the Mould Control Program.

#### 3.1 Environmental Health and Safety (EHS)

- 1. To be responsible for the development, maintenance, quality and effectiveness of the Mould Control Program.
- 2. To provide technical advice and recommendations regarding prevention of mould growth, identification of mould, hazard evaluation, and the control measures related to mould.
- 3. To provide consultation to University departments in investigations/assessments for mould contamination when required, including the classification (Level I, II, III, IVa or IVb) of mould remediation work. Qualified consultants may be engaged as needed to provide assessments/consultation including but not limited to invasive exploration (e.g. opening ceiling, walls, etc.).

- 4. In situations where the mould investigation is triggered by the occupant(s) experiencing symptoms listed in Appendix B, the Property Manager (St. George), Director, Facilities Management and Planning (Mississauga), or the Director, Facilities Management (Scarborough) shall contact Environmental Health and Safety who will then conduct an investigation.
- 5. To provide ongoing mould training and education programs as necessary.
- 6. To conduct respiratory protection training and fit-testing for all University employees who may conduct mould remediation work, in keeping with the University's Respiratory Protection Program.
- 7. To review this program at least every 5 years.
- 8. In cases of mould related illness, to provide health professionals with information regarding the mould exposures.

# 3.2 Manager, Hazardous Construction Materials Group (HCMG), Facilities and Services – St. George Campus

The Manager, HCMG in Facilities and Services, has the following responsibilities:

- 1. To assist in implementing, and to enforce the requirements of the Mould Control Program for all mould remediation work initiated by any division within Facilities and Services.
- 2. To work in close liaison with all divisions within Facilities and Services, Capital Projects, EHS, and other departments who conduct mould related work to ensure compliance with the Mould Control Program.
- 3. To assist internal and external departments in the classification (Level I, II, III, IVa or IVb) of mould remediation work.
- 4. To notify Environmental Health and Safety of all Level II, III, IVa or IVb mould remediation work.
- 5. To review and approve all Level II, III, IVa and IVb mould remediation work initiated by divisions within Facilities and Services that he/she is aware of.
- 6. To ensure that all work involving mould that is under his/her authority, is conducted only by qualified employees or external contractors, that safe work procedures are in place, and that all other requirements of the Mould Control Program are implemented. This shall be accomplished by monitoring the progress of such work and by conducting random site inspections.
- 7. To ensure that competent and reputable mould remediation contractors and consultants are used, based on proven service and performance, and documentation of adequate training and experience.

- 8. To conduct or assist in the investigations for potential mould contamination, and to make recommendations on the appropriate remediation measures required.
- 9. To respond to findings of newly reported mould contaminated material and water damage during project activities and to ensure that appropriate cleanup and remediation are completed in a timely manner and in accordance with the Mould Control Program.

#### *3.3 Director, Divisions responsible for Contracting or Performing Mould Remediation Work – All Campuses*

While not limited to the below, this section typically applies to:

- Director, Property Management and their designates (e.g. Property Managers), St. George Campus
- Director, Utilities and Building Operations and their designates (e.g. Managers, Mechanical Operations & Maintenance), St. George Campus
- Director, Building Services and Grounds Services and their designates (e.g. Manager, Trades), St. George Campus
- Executive Director, Capital Projects and their designates (e.g. Project Managers) St. George Campus
- Director, Facilities Management and Planning and their designates, Mississauga Campus
- Director, Facilities Management and their designates, Scarborough Campus
- To report any discovered mould contamination and follow the mould classifications defined in this program as Level I, II, III, IVa or IVb for all mould remediation work under his/her jurisdiction in consultation with the Manager, HCMG (F&S – St. George) or Environmental Health and Safety.
- 2. To be responsible for all mould remediation work (Level I, II, III, IVa and IVb) performed by his/her staff or external individuals whom he/she contracts to do the work, to provide supervision as appropriate, and to ensure that such work is conducted in accordance with the Mould Control Program by regular monitoring of the progress of the work and conducting regular site inspections.
- 3. To ensure that his/her employees and external contractors who will perform mould remediation work or are permitted access to areas where mould contamination is being disturbed have been provided proper training and education in accordance with the Mould Control Program.
- 4. To provide notification of Level II, III, IVa and IVb remediation work, reasonably in advance of the commencement of the work, to:

For All Campuses:

- a. the Director, Health and Safety;
- b. local building occupants
- c. local joint health and safety committee (JHSC)

In addition, for St. George Campus:

a. the Manager, HCMG (F&S);

b. the Director, Property Management for areas involving the building fabric; and

c. the Director, Utilities & Building Operations for areas under the control of Utilities & Building Operations.

In addition, for Mississauga Campus: a. the Director, Facilities Management and Planning.

In addition, for Scarborough Campus: a. the Director, Facilities Management.

- 5. To be responsible for liaising, as needed, with building occupants and local joint health and safety committees regarding the precautions for all mould remediation work taking place in their building.
- 6. To maintain records of all mould remediation work for which he/she is responsible and to forward copies to the Manager, HCMG (St. George Campus only).
- 7. To respond to findings of newly reported mould contamination and water damage, and to ensure that appropriate cleanup and remediation are completed in a timely manner and in accordance with the Mould Control Program.

# *3.4 Director, Divisions responsible for the operation and maintenance of building ventilation and utility systems – All Campuses*

In addition to those responsibilities listed under Section 3.3, the division heads who are responsible for building heating, ventilation and air-conditioning (HVAC) and utility systems have these additional responsibilities for operating and maintaining their systems to prevent the occurrence of mould growth:

- 1. To ensure that regular inspection of the Utilities equipment for conditions listed in Appendix A2 are conducted and that any discovered problems are corrected in a timely manner.
- 2. To report any discovered mould contamination in the HVAC and utility system to the Manager, HCMG (St. George only) or Environmental Health and Safety.
- 3. To respond to findings of newly discovered mould contamination and water damage, and to ensure that appropriate cleanup and remediation (Appendix A3) are completed in a timely manner and in accordance with the Mould Control Program.
- 4. To inform prospective external contractors or internal departments who may be contracted to perform work about the presence of mould.
- 5. To ensure that internal or external contractors who are permitted access to areas where mould contamination is being disturbed have been provided proper training and education in accordance with the Mould Control Program.

# 3.5 Director, Divisions responsible for maintaining University property

In addition to the general responsibilities listed under Section 3.3, the division heads responsible for property management, repair and maintenance have these additional responsibilities for maintaining buildings to prevent the occurrence of mould growth:

- 1. To manage University buildings in accordance with the guidelines for prevention of mould growth in buildings listed in Appendix A1.
- 2. To ensure that any deficiencies in the envelopes of buildings resulting in water intrusion are attended to and promptly repaired.
- 3. To report any discovered mould contamination to the Manager, HCMG (St. George only) or Environmental Health and Safety.
- 4. To respond to findings of newly discovered mould contamination and water damage, and to ensure that appropriate cleanup and remediation are completed in a timely manner and in accordance with the Mould Control Program.
- 5. To inform prospective external contractors or internal departments who may be contracted to perform work about the presence of mould.
- 6. To ensure that internal or external contractors who are permitted access to areas where mould contamination is being disturbed have been provided proper training and education in accordance with the Mould Control Program.
- 7. To ensure clean-up of flood water in buildings, the repair of leaks and drying of the wet areas is completed within 48 hours following procedures outlined in Appendix A3.

# 3.6 All Department Heads

Department Heads have the following responsibilities with respect to the Mould Control Program:

- 1. To ensure that all employees in the department are familiar with and comply with their responsibilities under the Mould Control Program.
- 2. To ensure that employees and other building occupants are notified of scheduled mould remediation work within their workplace.
- 3. To notify the Property Manager (St. George), Director, Facilities Management and Planning (Mississauga) or Director, Facilities Management (Scarborough) when they identify suspect mould present in their workplace.
- 4. To notify the Property Manager (St. George), Director, Facilities Management and Planning (Mississauga) or Director, Facilities Management (Scarborough) of any water episodes (leaks,

spills, seepage, flooding, etc.) in their workplace.

5. Departments that have or operates cold rooms and walk-in freezers are responsible for following best practices to reduce the likelihood of mould growth inside cold rooms. Some general practices can be found on the EHS website: http://ehs.utoronto.ca/resources/policies-and-procedures/#M.

#### 3.7 University Staff and Students

University staff and students have the following responsibilities:

- 1. To be familiar with and work in compliance with the requirements of the Mould Control Program as it applies to their work.
- 2. To abide by all access control restrictions posted on areas where mould remediation is taking place.
- 3. To report any suspected (potential) mould contamination in their work or study environment to their supervisor immediately.
- 4. To report any water episodes (leaks, spills, seepage, flooding etc.) in their work or study environment to their supervisor immediately.

#### 3.8 External Mould Remediation Contractors

External mould remediation contractors have the following responsibilities:

- 1. To comply with the requirements of the University Mould Control Program.
- 2. To ensure that all employees under their direction are properly trained in the hazards of mould and control procedures prior to conducting any mould remediation work, and to provide documentation of this to the department contracting the work.
- 3. To ensure that workers immediately stop all work and notify the department contracting the work in the event that previously unidentified mould contaminated materials are discovered in the course of work.
- 4. To ensure that any water episodes are responded to promptly.

# 4.0 PREVENTION OF/ONGOING SURVEILLANCE FOR MOULD GROWTH

Mould needs moisture to grow. In order to prevent the growth of mould in the indoor environment, the sources of moisture must be identified and controlled.

#### 4.1 Inspections and Reporting

Visual inspections of buildings and materials/fabric must be conducted on a regular basis in order to detect any water episodes (leaks, spills, seepage, flooding etc.) early, so they can be dealt with promptly.

- 1. Supervisors shall, on an ongoing basis, inspect for signs of water episodes or water damage in their area as part of their workplace inspection. Potential problem areas should be inspected on a more frequent basis.
- 2. Visual inspections in the University buildings for signs of water episodes or water damage may be conducted by local Joint Health and Safety Committees (JHSC) as part of their workplace inspections. JHSC workplace inspections are conducted in addition to routine workplace inspections performed by the supervisor.
- 3. Where water intrusion, leaks, spills, signs of flooding or water damage are noted in the course of the above inspections, they must be reported to the building Property Manager (St. George), Director, Facilities Management and Planning (Mississauga) or Director, Facilities Management (Scarborough).
- 4. Visual inspections in the utility rooms and steam tunnels and of the HVAC systems for signs of water episodes or water damage is conducted by the Utilities Joint Health and Safety Committee (St. George), Director, Facilities Management and Planning (Mississauga), or Director, Facilities Management (Scarborough) as part of their workplace inspections.
- 5. All other individuals shall report signs of water episodes or water damage to their supervisor, who in turn shall report this to the building Property Manager (St. George), Director, Facilities Management and Planning (Mississauga) or Director, Facilities Management (Scarborough).

#### 4.2 Mould Prevention Guidelines

#### 4.2.1 Prevention of Mould Growth in Building Fabric

The Director, Property Management (St. George), Director, Facilities Management and Planning (Mississauga) and the Director, Facilities Management (Scarborough) or their delegates, where appropriate, shall:

- 1. Follow guidelines outlined in Appendix A1.
- 2. Promptly respond to any reports of water episodes (leaks, spills, seepage, flooding etc.) and shall, where appropriate, follow guidelines outlined in Appendix A3.
- 3. Ensure that any roof leaks, building envelope failures, construction defects, foundation leaks, or design flaws are remedied to prevent water from entering the building.
- 4. Ensure that any water episodes during project work are attended to promptly.

#### 4.2.2 Prevention of Mould Growth in HVAC System

1. The Director, Utilities (St. George), Director, Facilities Management and Planning (Mississauga) and Director, Facilities Management (Scarborough) or their delegates shall follow the guidelines outlined in Appendix A1 and A2.

# 4.2.3 Prevention of Mould Growth on Other Materials

1. The occupants of University buildings shall avoid storing paper products (cardboard, files), furniture, clothing or other organic materials in basements, cold rooms, walk-in freezers, or other high humidity areas.

# 5.0 INVESTIGATIONS FOR MOULD GROWTH

- 1. Most investigations for mould may involve interviews with the occupants in the area of the potential contamination, review of the building history with respect to water episodes, and/or visual inspection of the affected area and the surrounding areas. Invasive inspections techniques and bulk/air sampling may be required at the discretion of EHS.
- 2. Any identified mould growth shall be removed according to the procedures in Section 6.0.
- 3. The local joint health and safety committee is to be informed by EHS when mould air sampling is conducted for investigative purposes, and a worker member on the committee may be present at the beginning of sampling. Results of the air sampling will be provided to the local JHSC.

# 6.0 MOULD REMEDIATION PROCEDURES

Environmental Health and Safety has issued standard operating procedures for mould remediation. These procedures are based on the New York City Department of Health and Mental Hygiene's *Guidelines on Assessment and Remediation of Fungi in Indoor Environments* (2008), WorkSafe Manitoba's *Guide for the Investigation, Assessment, & Remediation of Mould in Workplaces* (2015) and the Environmental Abatement Council of Canada (EACC)'s *Mould Abatement Guidelines Edition 3* (2015).

The University of Toronto recognizes five levels of mould remediation work, Levels I, II, III, IVa and IVb, based on the mould hazard they present.

The detailed mould remediation procedures that have been issued by Environmental Health and Safety, are outlined in the manual *Mould Control Program – Procedures for Remediation of Fungi in Indoor Environments.* They include the following:

Level I	Small Isolated Mould Contaminated Area (less than 10 sq. ft.)
Level II	Mid-Sized Isolated Mould Contaminated Area (10-90 sq. ft.)

Level III Very Large Isolated Mould Contaminated Area (greater than 90 contiguous sq. ft.)
Level IVa Mould Contamination in the HVAC System (less than 10 sq. ft.)
Level IVb Mould Contamination in the HVAC System (10 sq. ft. or greater)

# 7.0 COMMUNICATIONS PLAN

Building occupants as well as persons responsible for the building and their operation should be made aware of the planned activities concerning remediation of fungi. The procedure for notification of Level II, III, IVa and IVb mould remediation work are outlined in Section 3.5, #5 will be followed. Hazard communication plans are outlined in the appropriate standard operating procedures (SOP) for each Level of mould remediation.

# 8.0 TRAINING AND EDUCATION

All University employees who may encounter mould contamination in the course of their work and/or who may be involved in the removal or handling of mould contamination shall receive appropriate training and education.

- 1. University employees who may be involved in removal or handling of mould contamination includes:
  - EHS533 Mould: Evaluating and Control the Hazard training, every 5 years
  - 2 hour Respiratory Protection training
  - Training on the use of enclosures and HEPA vacuums (This is covered in the asbestos training for type 1 and 2 activities and most cases, the same group of workers who may perform mould remediation. If there are employees who perform mould but not asbestos remediation, i.e. not expected to take the asbestos training for type 1 and 2 activities, contact EHS for alternative training.)
- 2. EHS533 Mould: Evaluating and Control the Hazard training shall cover the following topics:
  - Hazards of mould
  - Investigation and assessment of mould contamination
  - Control measures for mould
  - Overview of UofT Procedures for Remediation of Fungi in Indoor Environments
- 3. University employees who may encounter mould contamination in the course of their work (e.g. property managers, project managers, other facilities/building staff):
  - EHS533 Mould: Evaluating and Control the Hazard training
- 4. Individual supervisors and managers are responsible for identify employees who require training outlined in #1 and 2.
- 5. Individual project coordinators/managers (e.g. property managers, other authorizing managers) must follow the requirements for training of external mould remediation contractors

listed in Section 9.0.

# 9.0 EXTERNAL CONTRACT WORK

External contractors and consultants for mould remediation must be experienced and reputable in the field of mould consulting and management, and must be able to demonstrate compliance with the requirements outlined in this program. The department/Director authorizing the work within Facilities and Services (St. George Campus), Facilities Management and Planning (Mississauga) or Facilities Management (Scarborough) is responsible for:

- 1. Before authorizing work on any buildings or structures where mould removal might be required, provide a report(s) to any prospective contractors as part of the work specification:
  - a. a Designated Substance Report listing the location of designated substances (e.g. asbestos, lead, silica) that may be in the area;
  - b. the location of mould contamination that will be handled or disturbed;
  - c. the classification (Level) of mould remediation and specifications and procedures for the appropriate level mould remediation work. Where there is uncertainty, the authorizing department can consult with HCMG (St. George Campus) or EHS.
- Level II, III, IVa and IVb work **must** be reviewed and approved by the Manager, Environmental Hazards and Safety (F&S) for St. George Campus or Environmental Health and Safety for Mississauga and Scarborough Campuses.
- 3. Individual project coordinators or managers (e.g. property managers, project managers, other authorizing managers) must obtain written evidence from external mould remediation contractors that all workers have received appropriate instruction in the following:
  - Hazards of mould
  - Use, cleaning and disposal of respirators and protective clothing
  - Entry and exit from work areas
- 4. Individual project coordinators or managers must ensure that external mould remediation contractors are familiar with the UofT Procedures for Remediation of Fungi in Indoor Environments.
- 5. Individual project coordinators or managers must obtain written evidence from external mould remediation contractors that their on-site supervisor has received the instruction through a mould course of at least one day duration.
- 6. The authorizing department/Director within Facilities and Services (St. George), the Director, Facilities Management and Planning (Mississauga), or the Director, Facilities Management (Scarborough) shall ensure that general contractors and subcontractors responsible for mould remediation follow the appropriate procedures.
- 7. All general contractors and subcontractors shall report any water damaged materials found during the course of their work to the appropriate Project Manager.
- 8. All Level III and IVb work shall be subject to inspections by appropriately qualified and

experienced personnel chosen by the Director of the appropriate Division in Facilities and Services (St. George), Director, Capital Projects, Director, Facilities Management and Planning (Mississauga) or the Director, Facilities Management (Scarborough).

- 9. Environmental Health and Safety shall be informed of all Level II, III, IVa and IVb mould remediation work reasonably in advance of commencement of the work.
- 10. Where during the course of remediation work, mould contamination is discovered which was not referenced in the report referred to in Section 9.1, the contractor shall immediately stop work, which may disturb that material and inform the department responsible for the contract.
- 11. Where mould contamination has been discovered as per Section 9.9, work shall not resume until the appropriate procedures (Level I, II, III, IVa or IVb) have been put in place.

# APPENDICES

# **APPENDIX A1 – Preventing Mould Growth in the Building Fabric**

The Property Manager, Project Manager and/or the Manager, Mechanical Operations and Maintenance (St. George), Director, Facilities Management and Planning (Mississauga) and the Director, Facilities Management (Scarborough), where appropriate, shall do the following:

- 1. Maintain relative humidity indoors below 60% to prevent condensation
- 2. Maintain caulking in bathrooms, showers, and at exterior locations
- 3. Avoid carpeting on cool floors, to prevent condensation
- 4. Avoid carpeting in bathrooms and old basements
- 5. Provide exhaust fans for shower moisture
- 6. Ensure even heating of buildings during winter to prevent condensation on the walls and exterior corners of unheated rooms
- 7. Promptly respond to any water incursions, even minor dripping pipes, rapidly
- 8. Ensure that proper cleaning practices are followed (e.g. do not use excess water in floor cleaning in areas with drywalls)
- 9. In the event of a flood:
  - a. Remove the water as soon as possible
  - b. Discard non-salvageable materials immediately
  - c. Dry construction and finishing materials rapidly (less than 24 hours)
  - d. Dry surfaces in wall cavities and plenums
  - e. In instances where a building engineer has been called into assist with an active leak and is the first to arrive, will also contact the Property Manager to ensure the appropriate action is taken for the prevention of mould growth on materials affected by the water event.

# **APPENDIX A2 – Preventing Mould Growth in HVAC System**

The Property Manager, Manager, Mechanical Operations and Maintenance (St. George), Director, Facilities Management and Planning (Mississauga), and the Director, Facilities Management (Scarborough) shall ensure the following:

- 1. Use the highest grade of filters compatible with the system, to reduce incoming mould spores
- 2. Maintain bird screens at air intake; keep roosting birds from air intake area and window air-conditioning units
- 3. Maintain biocide treatment of cooling tower
- 4. Avoid, and replace porous insulation installed in damp sections of ductwork with nonporous insulation
- 5. Keep spray washers, sumps and drip pans well drained and free of slime
- 6. Regularly inspect and permanently repair all areas where water collection or leakage is occurring in HVAC equipment
- 7. Operate HVAC system so as to avoid water droplets from dehumidification cooling coils, water spray systems, and humidifiers or from the mixing of air from hot and cold decks

# APPENDIX A3 – Responding to Water Episodes to Reduce the Potential for Mould Growth

The Property Manager and/or the Manager, Mechanical Operations and Maintenance (St. George), Director, Facilities and Management (Mississauga), Director, Facilities Management (Scarborough) and the Project Manager, where appropriate, shall do the following:

- 1. Stop the source of water/repair leak, etc.
- 2. Remove all water and debris. Additional asbestos procedures may be required if clean-up of (flood) water is contaminated with asbestos-containing materials (i.e., floods in designated buildings with asbestos sprayed fireproofing)\*.
- 3. Washable surface can be wiped with detergent and water. Then Rinse. Do NOT use bleach.
- 4. After cleaning, ventilate or dehumidify the area. Check progress regularly to avoid missing areas or water trapped under materials (e.g. carpet). Suggested methods include:
  - a. Increase central HVAC circulation
  - b. Open windows
  - c. Dehumidifiers
  - d. Fans
- 5. Where applicable, open cavities\*, remove baseboards\*, lift carpet off floors, and move furniture/stored items to allow walls and carpet to dry. This should be conducted as soon as possible after the water event. An EHS assessment is not required to initiate the drying process or the opening of wall/ceiling cavities. Property and facilities managers should work with contractors to complete this step where applicable and appropriate. EHS can be contacted for a mould assessment if the presence of mould is suspected or *if health concerns are reported*.
- 6. In some cases (e.g., when large areas of the building has been impacted), the services of the contractor or 3<sup>rd</sup>-party consultant may be considered to map out wet areas for drying.
- 7. Where applicable, advise occupants to sort personal belongings and files and lay out to dry as soon as possible after the water event.
- 8. Discard insulation materials and other porous materials (insulation, carpet, etc) that cannot be easily dried (within 24 hrs). Books and paper require professional conservators.
- 9. Ensure interior cavities and structural members are completely dry before closing cavities.
- 10. If the HVAC system was soaked, consult a HVAC contractor and inspect/clean the system as required.
- 11. When dealing with grey or black water, highly absorbent materials that has been soaked/contaminated should be discarded. Spraying with disinfection twice is generally recommended before handling. Environmental Health and Safety should be contacted when dealing with grey or black water.

\*If disturbing the building fabric, check the <u>Asbestos Data</u> webpage or contact HCMG/EHS.

# **APPENDIX B – Health Symptoms Commonly Associated with Exposure to Mould**

- Cold like or Flu-like symptoms
- Eye irritation
- Congestion
- Cough
- Hoarseness
- Respiratory tract irritation
- Respiratory tract infection
- Headache
- Fatigue
- Skin rashes