



## **2018-2019 MCGILL UNIVERSITY ANNUAL SAFETY REPORT**

### **A Report to the Human Resources Committee of the Board of Governors of McGill University**

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## LEXICON

AED	Automated External Defibrillator
BAC	Blank Access Cards
BWSS	Biomedical Waste Sterilization System
CCTV	Closed-circuit Television
CFIA	Canadian Food Inspection Agency
CFT	Call for Tender
CII	Criminal Incidents Index
CMARC	Comparative Medicine and Animal Resources Centre
CNL	Canadian Nuclear Laboratories
CNSC	Canadian Nuclear Safety Commission
CNESST	Commission des normes, de l'équité, de la santé et de la sécurité du travail
CPS	Campus Public Safety
DSC	Departmental Safety Committee
EHS	Environmental Health and Safety
EMP	Emergency Management & Preparedness
ENS	Emergency Notification System
EOC	Emergency Operations Centre
ERAP	Emergency Response Assistance Plan
FMAS	Facilities Management & Ancillary Services
FP	Fire Prevention
FSC	Facilities Safety Committee
GCRC	Goodman Cancer Research Centre
HR	Human Resources
HWM	Hazardous Waste Management
ICS	Incident Command System
IRS	Internal Responsibility System
JAC	John Abbott College
LIC	Laboratory Information Cards
LOTO	Lock Out Tag Out
MAC	Macdonald campus
MNI	Montreal Neurological Institute
MSP	McGill Service Provider
PAPR	Powered Air Purifying Respirators
PHAC	Public Health Agency of Canada
PI	Principal Investigator
R2R	Recruitment to Retirement

RAD	Rape Aggression Defense System
RWS	Round Witness System
SDR	Security Device Requests
SIM	Service de sécurité incendie de Montréal
SOC	Security Operations Centre
SOP	Standard Operating Procedure
SPF	Sustainability Project Fund
SSMU	Students' Society of McGill University
TC	Transport Canada
UERP	University Emergency Response Plan
UHSC	University Health and Safety Committee
ULSC	University Laboratory Safety Committee
WHMIS	Workplace Hazardous Materials Information System

## EXECUTIVE SUMMARY

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### Trends

**Environmental Health and Safety:** In 2018-19, the revamped Workplace Hazardous Materials Information System (WHMIS) course was launched. Approximately 2,000 people participated in the new course, bringing the numbers for all EHS safety course registrations to 5,748.

All of the “high risk” and the “moderate risk” issues documented in the 2017 Internal Audit Report on Environmental Health and Safety have been addressed or are part of an action plan. The scope of the report included: (1) Governance and Control Environment; (2) Key information systems and planning tools used by the Unit; (3) Operational Processes specific to EHS; and, (4) Operational Processes specific to HWM. The outstanding action items are IT matters, such as a new call ticket system, an incident tracking system to enable statistical analysis, and the a new course registration and training management system to be instituted by HR at the time of the launch of R2R. In March 2019, another Internal Audit was completed for asbestos processes at McGill. EHS was the main stakeholder in most of the findings and prepared an action plan. Most of the findings related to quality control issues and more time to asbestos management. A full-time professional was hired to advance asbestos management and the regularizing process has begun for one technician who was on contract.

EHS used the new risk-based assessment tool to retrofit older laboratories with emergency eye wash and shower units for Strathcona Anatomy and Dentistry Building and for all the laboratory buildings at Macdonald campus. As requested by the Montreal Neurological Institute (MNI) management, the service level agreement with EHS was discontinued. EHS will continue to manage the licensing of the research labs and perform the lab inspections of these facilities as required by the Canadian Nuclear Safety Commission, while the MNI will assume responsibility for the Cyclotron and the Positron Emission Topography (PET) Unit.

EHS has now begun the service of conducting fit tests for employees who work around asbestos, animal care workers, operators who work around chemical fume hoods, hazardous waste handlers, and emergency handlers. The service has also been extended to students, who have been unable to be fit tested by Student Health Services.

In 2018-2019, EHS reported 730 service calls, a marginal increase, but still on par with the trend over the past several years (p. 14). There was a notable increase in calls for: Accident, Incident, and Occupational Disease Investigations (67% increase over 2017-2018), Ergonomic Assessments (83% increase over 2017-2018), and Indoor Air Quality (24% increase over 2017-2018). Ergonomic interventions continue to increase substantially because the Occupational Health Administrator is now trained in office ergonomics assessments. The increase in the number of indoor air quality investigations was due to two principal trends: a higher number of requests for mold evaluations whenever water infiltration is involved and more complaints around dust and odors caused by construction projects.

**Security Services:** While the overall volume of reported incidents downtown remained relatively unchanged in 2018-2019, there was a significant increase in “Incidents against the Person,” with the majority falling under the category of “Threats or Harassment” (1 in 2017-2018 vs. 20 in 2018-2019, p. 27). As for incident reports triggered by calls and alarms received by Security Services, the trend showed a decrease in nearly all categories.

The total number of weekly calls received by the Macdonald Campus Security Operations Centre (SOC) decreased from an average of 72 per week in 2017-2018 to an average of 62 per week in 2018-2019, a decrease of 14% (p. 22). Notably, the decreases occurred primarily in the following categories: “Alarms” (40%) and “Provide Assistance” (12%). For Emergency Calls, there were slightly fewer incidents (10% decrease from the previous year) due to enhanced/effective management of protocols – although the weekly average of 2 per week remains unchanged. Looking at areas found unsecured (weekly average from 4 to 3), there was an overall decrease (16% from the previous year) due to upgraded (keyless) access control equipment in strategic locations across campus. Ongoing efforts to promote safety initiatives and interventions have reduced overall criminal incidents (25% from the previous year).

**Fire Prevention:** Shorter equipment inspection cycles continue to keep the number of unfounded alarms down on campus, as they translate into faster turnaround times for equipment repairs and, subsequently, to fewer alarms triggered by equipment deficiencies. Thus, for the period from May 2018 to April 2019, the number of unfounded alarms remained relatively unchanged at 71 compared to last year's 72 (p. 18).

### **Capacity Building**

- EHS introduced WHMIS 2015 for lab personnel, in line with the new Globally Harmonized System adopted by the Canadian government (p. 28).
- EHS produced a new safety video aimed at orienting graduate students in laboratory safety: <https://www.mcgill.ca/ehs/training/gradstudentlabsafetyvideo>.
- Security Services saw a 43% increase in the number of transports by our mobility assistance service, owing to improved efficiency in the delivery of the service (p. 21).
- Emergency Management & Preparedness (EMP) conducted a full-scale emergency simulation on the downtown campus involving approximately 150 participants, including external emergency response agencies, as well as members from Security Services, Fire Prevention, Parking & Transportation, Student Housing and Hospitality Services, Environmental Health & Safety, and Hazardous Waste Management at McGill University. EMP also conducted several other training exercises, including training to the McGill Daycare staff. The acquisition of the AlertGo App will offer easier and more effective communication between responders during emergencies (p. 31).
- Campus Public Safety (CPS) carried on its mission to maintain a safe campus by facilitating the installation and operation of new bollards at the McTavish Gates. As well, CPS began the process of developing a new event booking policy to reduce the potential risks involved in hosting external events.

### **Moving Forward (2019-2020)**

- The Director of EHS will be retiring after 35 years of service (p. 34).
- EHS will launch the myLab Laboratory Information Cards (LICs) to display safety and emergency information on lab doors (pp 31).
- EHS will be merging with CPS (p. 34).
- With funding from the Sustainability Project Fund (SPF) and Facilities Management (FMAS), Hazardous Waste Management will install a biomedical waste sterilization system. The installation will enable the University to avoid sending non-anatomical biohazardous waste to the United States for disposal. This will translate into an estimated reduction of 34% of greenhouse gas emissions associated with the disposal of this waste (p. 31).
- The Fire Prevention Office will implement processes for integrating ONYX technology and will streamline all service contracts in collaboration with Procurement Services (p. 35).
- FPO will continue advancing the fire prevention program at Macdonald campus as well as in Residences (p. 35).
- FPO will continue with the replacement of all outdated fire panels, including transmitter boxes (p. 35).
- EMP will establish a working group to develop a McGill-specific Emergency Response Plan template for faculties and departments (p. 35).
- Security Services will be going to tender to purchase a new computer-aided dispatch and incident management software system for both campuses to replace HEAT presently in use (p. 35).
- Security Services at Macdonald campus will see the new round witness system fully implemented in the coming year to track officers in the field and for security rounds in strategic areas that require inspection (p. 34).

## **Key Needs**

- For EHS the outstanding items remaining to be addressed relate mostly to IT support, including the need for a new call ticket system, an incident tracking system to enable statistical analysis, and a course registration and training management system.
- Because we now have funding to purchase new incident management software, a key need for the coming year includes a public call for tender to purchase the software and the subsequent implementation of the new software. This will undoubtedly take longer than twelve months to accomplish and will remain a key need until the software has been purchased, installed, and successfully launched (p. 32).
- One significant need recognized by Campus Public Safety is a new formal policy regarding Event Booking on our campuses, along with a suitable software to facilitate the process.
- The significant and continuous increase of projects on the downtown campus has and continues to impact the already strained human resources in all of the Campus Public Safety units (Parking & Transportation, Fire Prevention, Emergency Management & Preparedness, and Security Services). A request from the Director-Campus Public Safety was submitted in November 2018, pertaining to the hiring of the required, additional human resources to adhere to the increase in services to be provided to the community in order to ensure a safe environment for all and to ensure and contribute to the wellbeing of the Campus Public Safety staff members.
- In order to streamline processes and services offered to our downtown community members, which will also ensure that our community members receive the best services possible in a timely fashion, the need remains to amalgamate all CPS units under one roof, a “Hub” that will provide a “one stop shop” for all safety services offered. It is imperative that services as important as personal safety be offered and provided from one location. Presently the units are at four distinct locations.

# 1 INTRODUCTION

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This report summarizes the events and activities related to issues of health and safety at McGill University for the period of May 1<sup>st</sup>, 2018 to April 30<sup>th</sup>, 2019. The scope of this report includes all aspects of safety, reflecting the mandate of the safety units under Campus Public Safety (Emergency Management & Preparedness, Security Services and Fire Prevention) as well as Environmental Health and Safety (Environmental Health & Safety and Hazardous Waste Management).

The Director of Campus Public Safety also oversees Parking and Transportation Services, which manages all parking activities. The unit provides guidance and support to the community on logistical issues related to parking and transportation on the campus grounds. Due to their limited involvement in safety, this report will not include the Parking & Transportation Services department.

## 1.1 Administration

Through sharing of resources, information, and expertise, the three safety branches of Campus Public Safety as well as the Parking and Transportation Services department collaborate with other units, including Environmental Health and Safety, to provide services to the McGill community. The organizational structure and current staffing levels are shown in Appendices 1 and 2.

### 1.1.1 Mission Statement – Campus Public Safety

McGill University's Campus Public Safety Department works with the community to promote a safe and secure environment for students, faculty, staff and visitors through education, prevention and response.

The members of the Campus Public Safety Department: Security Services, Fire Prevention, Parking and Transportation Services, and Emergency Management and Preparedness, are committed to respecting the needs and interests of the university community, and to being diligent in the protection of both persons and property.

As such, we encourage our partners in the community to assume their individual and collective responsibilities to make McGill University a place that is safe, and to provide an open environment that fosters learning and education.

### 1.1.2 Mission Statement – Environmental Health & Safety

Environmental Health and Safety supports the continuous improvement of a safety culture at the University by providing advice, guidance, training, and technical support to the McGill community. The safety culture encompasses a healthy and safe environment achieved through everyone's understanding of their related responsibilities and compliance with all regulatory requirements and University safety policies.



## 2 COMPLIANCE FRAMEWORK

The regulatory framework for safety within which the University operates falls under three levels of jurisdiction and encompasses a wide variety of relevant laws and regulations. The principal legislative entities driving compliance management and the associated means of monitoring and judging compliance are summarized in Figure 1.

**Figure 1** Compliance Framework

Jurisdiction	Legislation	Scope	Monitored by	Means of judging compliance
Federal	The Nuclear Safety and Control Act, S.C. 1997, c. 9	Governs the acquisition, storage, use, transfer, and disposal of radioactive materials (approximately 70 internal permits)	EHS	Inspection Internal licensing system “Cradle-to-grave” tracking of radioactive materials
	The Human Pathogens and Toxins Act and Regulations	Biosafety and biosecurity requirements for human pathogens and toxins under a single Act, licensing required by regulations. (approximately 235 internal permits)	EHS	Registration with federal government Inventory of pathogens Laboratory biosafety inspections Security clearance for risk level III and up Administrative Oversight Plan
	Health of Animals Act (HAA) (for terrestrial animal pathogens & toxins)  Health of Animals Regulations (HAR)	Biosafety and biosecurity regulations for foreign and emerging animal diseases, as well as animals, animal products, and animal by-products that contain a terrestrial animal pathogen and for the importation or transfer of aquatic animal pathogens.	EHS	<b>Regulations require</b> Import permits and / or compliance documents issued. Inventory of pathogens Laboratory biosafety inspections
	Plant Protection Act and Regulation	Biosafety and biosecurity requirements for working with, importing or transferring plant pathogens.	EHS	<b>Regulations require</b> Import permits and / or compliance documents issued. Inventory of pathogens Laboratory biosafety inspections
	Hazardous Products Act and Regulations	Governs the acquisition, storage, use, transfer, and disposal of hazardous materials such as Workplace Hazardous Materials Information System 2015 (WHMIS 2015).	EHS	Inspection Inventory tracking of hazardous materials, using myLab Training
	Transport of Dangerous Goods Act and Regulation	Governs the safe handling and transportation practices for dangerous goods	EHS/HWM	Training certification required by regulations for all persons who handles, offers for transport or transports dangerous goods

<b>Provincial</b>	The Act respecting Occupational Health and Safety, R.S.Q., c. S-2.1 and associated regulations	General duties of care e.g. employer's obligation to provide a safe workplace Prescriptive regulations governing work conditions	EHS	Inspection Internal activity reporting Incident tracking System audits
	The Act respecting industrial accidents and occupational diseases, R.S.Q., c. A-3.001	Quebec's system of compensation for the cost of work-related injuries or illnesses	Benefits Office (HR) & EHS	Tracking and managing CNESST claims, costs, & return-to-work efficiency
	The Environmental Quality Act, R.S.Q., c. Q-2 and related hazardous waste regulations	The collection, transfer and disposal of hazardous wastes	EHS (HWM)	Tracking and reporting of wastes collected, transferred and shipped Inspection of waste collection Incident tracking Audits of service providers
	Safety Code for the Construction Industry s-2.1,r6	Safety in construction sites Works liable to disturb asbestos	FMAS and EHS	Site inspection Accident investigations Safety interventions Project management Asbestos registry, inspection, training (EHS)
<b>Municipal</b>	Municipal Fire Code	Governs all aspects of fire protection, including the application of the national fire code	FPO	Inspection System certification Incident tracking

This year, no new laws and regulations were added to the regulatory framework for safety within which the University operates, and the information is presented in Figure 1.

## 2.1 Safety Committee Management System

As shown in Figure 2, there are a number of safety committees at McGill. This structure includes committees with representation from across the University as well as committees within academic, administrative, and service units.

### 2.1.1 University Health and Safety Committee (UHSC)

The University Health and Safety Committee is the umbrella safety committee, responsible for University-wide health and safety issues. Mr. Robert Couvrette, Associate Vice-Principal (Facilities Management & Ancillary Services) chairs the committee. The committee met four times in 2018-2019. This committee is comprised of all of the McGill staff and student unions and associations, balanced with a nearly equal number of management representatives.

Topics addressed throughout the year included:

- McGill Smoking Policy
- Cigarette Smoke Entering Tanna Hall and Redpath Museum
- Regulatory Agency Interventions
- High Humidity in Cold Rooms of Life Science Complex
- Temperatures in Redpath Museum
- Lab Evacuation Procedures

- The July 13, 2018 McIntyre Fire

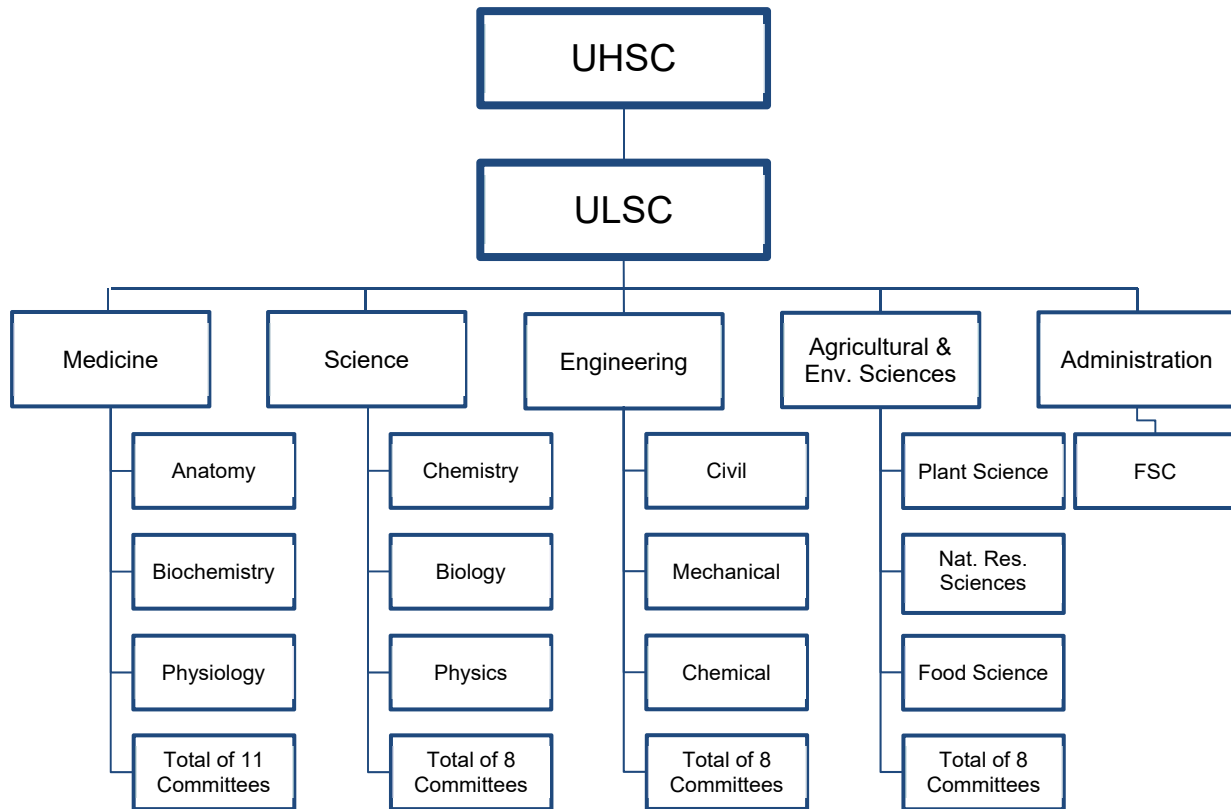
### 2.1.2 University Laboratory Safety Committee (ULSC)

The University Laboratory Safety Committee (ULSC) provides a forum where laboratory safety issues can be addressed and where policies and protocols can be developed in a consistent and effective manner. The committee structure continued to work well; each faculty presented a summary of their activities of the year and shared ideas for improving safety culture that are working well. The biosafety, laser safety, and radiation safety officers also presented their annual reports.

The ULSC reports to the Office of the Vice-Principal, Research & Innovation. The Vice-Principal renewed the appointment of Professor Alvin Shrier as Chair. The committee met eight times in 2018-2019. Topics addressed throughout the year included:

- New Safe Use of Biological Safety Cabinets training and exam launched in September 2018
- Sustainable Labs Working Group
- Lab Decommissioning Procedures and Policy
- Biosafety Subcommittee's new SOPs for Biosafety Cabinets and Autoclaves
- EHS activity reports
- The approval of a centralized sterilization system
- The Montreal Neurological Institute (MNI) cyclotron renovation project
- The installation of new eyewash stations in Strathcona Anatomy and McIntyre Medical buildings and at Macdonald campus
- The approval of new fume hoods for Macdonald campus
- The Containment Level 3 lab in the Bellini building received the Public Health Agency of Canada permit and McGill obtained a Human Pathogens and Toxins Class 3 license for work with *Mycobacterium tuberculosis*
- Reviewed and approved the recipient of the first Sustainable Lab award
- As of May 2019, a new Safety Data Sheet Database vendor, MSDSONline, was established

**Figure 2 Structure of Safety Committees at McGill University**



- Medicine also includes CMARC, Biomed. Eng., Cancer Centre, Microbiology & Immunology, MNI, Pathology, Pharmacology, Psychiatry
- Science also includes Bellairs, Earth & Planetary Science, Geography, Psychology, Redpath Museum
- Engineering also includes Architecture, Bioengineering, Mining and Materials Engineering
- Agriculture & Environmental Sciences also includes Animal Science, Bioresource Engineering, Dietetics & Human Nutrition, Mac Campus Farm, Parasitology

### 2.1.3 Facilities Safety Committee (FSC) (Previously known as the University Safety Committee (USSC))

The Facilities Safety Committee provides a forum for facilities managers, supervisors, and employees to receive and review safety issues related to their specific operations and to develop safety policies and procedures. This Committee was originally set up to deal with Facilities Management and Ancillary Services (FMAS) only, however it was expanded to include all facility managers in order to attain a consistent safety standard across all the University. It is currently chaired by Wayne Wood, Director, EHS. Representatives are drawn from FMAS, Athletics, Residences, Macdonald Campus Farm, and the Gault Nature Reserve.

In 2018-2019, the Committee met six times. Items discussed included:

- Confined Space Entry
- Lock-out Tag out Training
- Ferrier Garage Post-Inspection Safety Issues
- MNI Sanitation Pumps
- Cleaners Changing bulbs in new systems
- Procedure for Sewage Clean-Up
- Electrical Safety Program Development and Training

- Respiratory Fit Testing
- Asbestos
- Construction Safety

#### 2.1.4 Faculty Safety Committees (FSC)

Faculty Safety Committees exist in the four faculties with laboratory operations and provide oversight of the Departmental Safety Committees and representation to the ULSC. These committees report to their respective Faculty Deans on health and safety activities and the head of each committee acts as a faculty representative on the ULSC. The Chair of each committee is also automatically a member of the ULSC.

All four faculties sent representatives to ULSC meetings and all of them presented an activity report.

The Faculty Safety Committee Chairs are:

- Science – Mr. Jean-Marc Gauthier
- Medicine – Professor Dieter Reinhardt and Dr. Carmen Lampron
- Agricultural and Environmental Sciences – Professor Petra Rohrbach
- Engineering – Professor Andrew Boyd

#### 2.1.5 Departmental Safety Committees (DSC)

Departmental Safety Committees are required for all departments which have operating labs. Each committee is required to submit a report of their annual activities and priorities for the upcoming year. At the time of this report, 29 out of 36 committees have submitted activity reports. Reminders were sent to all Department Safety Committee Chairs and a second reminder was sent to the Faculty Safety Committees and their respective Deans.

EHS compiled, reviewed and summarized the reports for the University Laboratory Safety Committee to nominate the annual winner of the Departmental Safety Committee Productivity Award. The winner for 2018-2019 was the DSC from the McGill University Genome Centre Committee, chaired by Dr. Yasser Riazalhosseini.

### 3 CNESST CLAIMS

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#### CNESST Statement

CNESST claims for the calendar years from 2013 to 2019 are presented below.

**Figure 3** CNESST Claims from 2013 to June 2019

Claims per year <sup>(1)</sup>	2019 <sup>(2)</sup>	2018	2017	2016	2015	2014	2013
Claims made	34	43	45	57	58	59	61
Claims accepted	19	35	31	45	34	39	50
Claims charged	17	30	26	33	29	37	44

(1) CNESST's reference period is the calendar year.

(2) Represents data collected during the first 6 months of 2019.

#### Financial Data

Figure 4 contains financial data associated with the University's insurance premium. McGill is subject to the retrospective plan which means the impact of a certain year will be felt four years later: i.e. the results of 2019 will be realized in 2023.

**Figure 4 Financial Data**

Rate	2019	2018	2017	2016	2015	2014	2013
Unit rate \$ <sup>(1)</sup>	0.58	0.58	0.57	0.59	0.63	0.66	0.71
McGill initial rate \$ <sup>(2)</sup>	0.52	0.54	0.54	0.57	0.61	0.63	0.62
McGill current rate \$ <sup>(3)</sup>	0.52	0.53	0.53	0.56	0.58	0.57	0.56
Premium \$ <sup>(4)</sup>	N/A	2,802,833	2,612,081	2,532,846	2,538,346	2,496,666	2,349,963

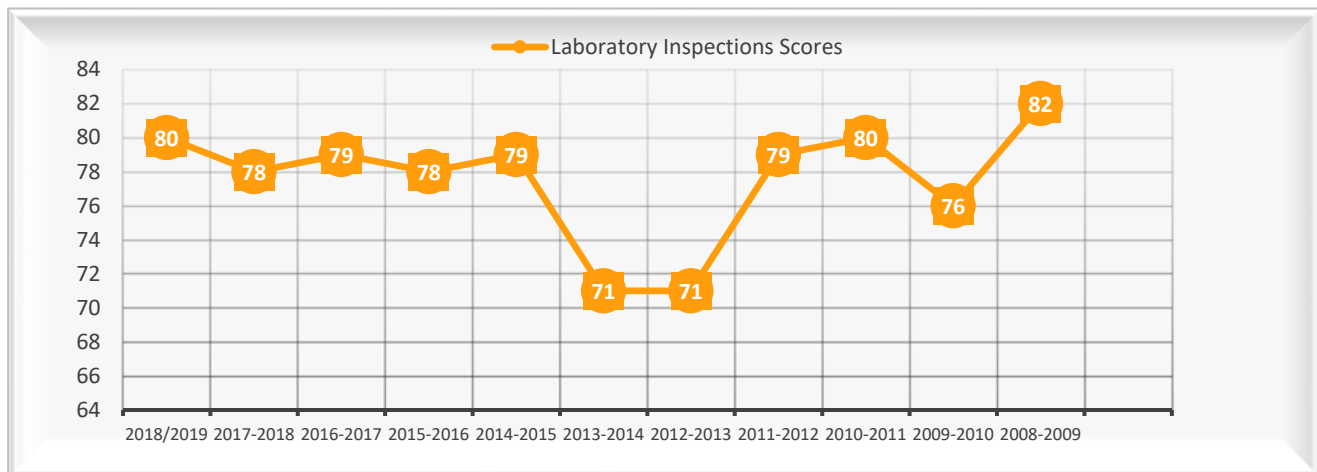
- (1) The unit rate represents a comparison rate for all colleges and universities in Quebec.
- (2) Represents the initial rate assessed by CNESST based on our past experience (for example, the 2019 McGill rate is based on our experience of the years 2014, 2015, 2016, and 2017).
- (3) If McGill's experience of previous years changes, the CNESST will recalculate the University's rate and this will be reflected by an increase or a decrease in the rate.
- (4) The premium used to be estimated at the beginning of each year. As of 2011, the CNESST has implemented a procedure for the payment of premiums requesting that it be paid weekly, based on wages paid, along with all others statutory governmental deduction remittance. The total premium for 2019 will be known in 2020. The premium is based on the University's insurable salary (calculation is: insurable salary x McGill rate / 100).

## 4 ENVIRONMENTAL HEALTH & SAFETY

### 4.1 Laboratory Inspection Program

During the period from May 1st, 2018 to April 30th, 2019, 211 laboratories were inspected (176 initial inspections and 35 follow-up inspections) with an overall score of 80%. Figure 5 shows the laboratory inspections scores since 2008-2009 as our initial starting point. The graph would suggest that there has been little change in performance, however new requirements in the area of biosafety have been introduced steadily over the past few years so one could conclude that the community is keeping pace with the changes.

**Figure 5 Laboratory Inspection Score History, by Fiscal Year**



Each inspection cycle of the University takes about two years, thus in any given year, EHS inspects approximately two of the four faculties. For the year 2018-2019, those faculties were Science and Education, and later in 2019-2020, Engineering. Facilities Management and Ancillary Services (FMAS), specifically the EHS lab and the Hazardous Waste transfer centre, were also inspected. Figure 6-a shows the inspection scores for their initial inspections.

**Figure 6-a** Laboratory Inspection Initial Scores (May 1, 2018 – April 30, 2019)

Faculty / Department	Score (%) <sup>(1),(2)</sup>	Total Inspections	No Reply Received <sup>(5)</sup>	Score <60%	Score > 75%	Score previous cycle (%) <sup>(3)</sup>
<b>Faculty of Science</b>	<b>80</b>	<b>113</b>	<b>19</b>	<b>6</b>	<b>74</b>	<b>68</b>
Biology	81	35	4	0	23	75
Chemistry	74	38	11	3	18	58
Earth and Planetary Sciences	77	11	2	2	6	66
Geography	86	2	0	0	2	71
Physics	92	18	1	0	18	67
Psychology	84	5	0	0	5	82
Redpath Museum	75	4	1	1	2	59
<b>Faculty of Education</b>	<b>87</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>80</b>
Integrated Studies in Education	87	1	0	0	1	80
<b>Facilities Management &amp; Ancillary Services (FMAS)</b>	<b>87</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>89</b>
Environmental Health and Safety	82	1	0	0	1	88
Hazardous Waste Management	91	1	0	0	1	89
<b>Faculty of Engineering</b>	<b>81</b>	<b>60</b>	<b>X<sup>(5)</sup></b>	<b>1</b>	<b>42</b>	<b>79</b>
Bioengineering	88	7	0	0	6	66
Chemical Engineering	87	16	X <sup>(5)</sup>	0	14	84
Civil Engineering	71	10	X <sup>(5)</sup>	0	2	76
Mechanical Engineering	75	13	X <sup>(5)</sup>	1	7	79
Mining and Materials	83	14	X <sup>(5)</sup>	0	13	86

Additionally, follow up-inspections are performed in laboratories deemed as higher risk labs as well as labs that scored poorly, as shown in Figure 6-b.

**Figure 6-b Laboratory Inspection Follow-Up (FU) Scores (May 1, 2018 – April 30, 2019)**

Faculty / Department	Score (%) <sup>(1),(2)</sup>	Total Inspections	No Reply Received	Score <60%	Score > 75%	Score previous cycle <sup>(4)</sup>
<b>Faculty of Dentistry (Follow-ups)</b>	<b>83</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>No FU</b>
Dentistry	83	1	0	0	1	No FU
<b>Faculty of Medicine (Follow-ups)</b>	<b>79</b>	<b>34</b>	<b>17</b>	<b>1</b>	<b>21</b>	<b>82</b>
Anatomy and Cell Biology	77	2	1	0	1	84
Biochemistry	81	10	6	0	7	84
Goodman Cancer Centre	81	8	2	0	5	83
Microbiology and Immunology	75	8	4	1	4	73
Montreal Neurological Institute	79	2	1	0	2	79
Physiology	77	4	3	0	2	85

### Legend

- (1) Computed as percentages using the formula: # of inspection items deemed as "PASS" / # of applicable items x 100
- (2) Numbers are rounded to the nearest whole number
- (3) Score received for original inspections during the 8<sup>th</sup> inspection cycle (2016-2018)
- (4) Score received for follow-up inspections during the 8<sup>th</sup> inspection cycle (2016-2018)
- (5) The deadline for submitting the responses for Faculty of Engineering is set for September 2019

### Interpreting Laboratory Inspection Scores

Laboratory inspection scores are computed as percentages using the formula: number of inspection items deemed as "PASS" divided by the number of applicable items times one hundred. The inspection checklist is based on key "auditable" items. The checklist is displayed as Appendix 3. Prior to each cycle, the list is reviewed for relevance, adherence to regulatory compliance, and relative risk (see fig 6-c). This year, we continue to inspect the sustainable practices in the labs. This section is not part of the overall inspection score but the results of the sustainability portion of the checklist will be used to nominate the sustainability award for labs.

The laboratory inspection reports and scores are provided to the principal investigator (PI) along with an explanation of how the items were interpreted. If the PI receives less than a perfect score (100%), they are asked to respond to Environmental Health and Safety (EHS) within six weeks, explaining the corrective measures or action plan they will take. In addition, laboratories scoring less than 60% are subject to a follow-up inspection. Low response rates have been a chronic problem in recent years so the new protocol calls for that reminder to be escalated to the Departmental Safety Committee as well as the Department Chair. Further, if a response is not received within the next 4 weeks the reminders are escalated to the Faculty Safety Committee and the Dean.

Laboratories with scores of 75% and greater are considered "certifiable" and therefore qualify for approval of internal permits, safety certifications and sign-offs for research grant applications. However, they are still required to respond to EHS to explain the corrective measures they will take. Laboratories who score below 60% are automatically added to the list of laboratories to undergo follow-up inspections.



**Figure 6-c** Risk and Impact Involving Laboratory Inspections

<b>RISK</b>	
<b>HIGH RISK/LOW PROBABILITY</b> Requires immediate action e.g. gas cylinder not secure	<b>HIGH RISK/ HIGH PROBABILITY</b> e.g. daily toxic substance manipulation <b>CLOSE LAB</b>
<b>LOW RISK/LOW PROBABILITY</b> e.g. refresher training slightly overdue	<b>LOW RISK/HIGH PROBABILITY</b> Requires correction as soon as possible e.g. unidentified materials
<b>PROBABILITY</b>	

#### 4.2 EHS Service Calls

The EHS service calls data are shown in Figure 7. In 2018-2019, EHS reported 730 service calls, a marginal increase but still on par with the trend over the past several years. This table is generally reflective of the calls for service that come through the EHS office either by telephone or by e-mail.

The HEAT software used to input all the service calls is obsolescent. It was primarily designed for issuing call tickets and is not up to standard for generating reports and statistics on accidents and incidents. Potential new replacement systems were studied and tested and a decision for a new system is pending.

**Figure 7 Environmental Health & Safety Service Calls History, by Fiscal Year**

Category	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015
Access to information	1	0	1	2	1
Accident, Incident and Occupational Disease Investigation	90	54	76	57	61
Air Sampling	1	5	0	3	3
Animal Use Protocol	129	115	99	61	34
Annual Inspection of AED	13	10	16	15	4
Asbestos	29	36	24	32	29
Biosafety	7	24	32	30	34
Biosafety Site Visit	0	0	1	0	0
Chemical Fume Hood	2	15	9	4	5
Compliance Certificate	2	0	0	0	0
Construction Safety	12	14	36	32	46
CPR / First Aid	8	10	6	1	2
Decommissioning	11	13	9	5	8
EHS Administration	19	14	11	3	16
Emergency Response Plans	2	1	3	3	0
Environmental Issues	4	3	3	0	1
Ergonomics	114	75	41	9	13
General Safety Inquiry	56	58	51	45	67
Health and Safety Committees	11	13	11	17	9
Indoor Air Quality	66	82	50	46	57
IRS – Internal Responsibility System	1	0	0	1	0
Laboratory Safety	21	21	38	50	53
Laboratory Safety Inspections	4	14	6	13	6
Legal Issues	0	0	0	1	1
Media	2	0	1	0	1
myLab	0	4	1	0	1
Nanotechnology	0	1	3	2	4
New & Expectant Mothers Risk Assessment	3	8	2	6	6
Noise	2	5	10	2	1
Occupational Health	1	3	2	0	1
Orientation Session ( New PI)	17	19	22	8	20
Radiation Safety	4	7	13	9	13
Regulatory Agency (CNESST/CNSC/PHAC/CFIA)	13	10	18	19	29
Review of Plans	9	5	1	0	4
Safety Training (including WHMIS)	29	49	40	42	39
Temperature Regulation	1	1	4	2	1
Waste Management	10	7	17	12	15
Water Quality Testing	7	3	6	3	3
Water Spill & Flood	16	5	0	3	1
Workplace Evaluations	0	2	1	1	3
<b>Total</b>	<b>730</b>	<b>706</b>	<b>664</b>	<b>539</b>	<b>592</b>

### 4.3 Hazardous Waste Disposal Statistics

In accordance with legislation, Hazardous Waste Management (HWM) is mandated to collect, prepare, and ship hazardous waste for disposal in a safe, environmentally sound, and cost effective manner. The department also provides services in the area of laboratory decommissioning, response to hazardous materials emergencies, and the collection of electronic waste (e-waste).

Figure 8 shows the volumes for each of the categories of waste handled by HWM. Waste volumes fluctuate annually based on use by the McGill community.

**Figure 8 Hazardous Waste Statistics, by Treatment Type, Material, and Fiscal Year**

Treatment	Material	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015
<b>Recycling</b>	Alkaline batteries	565 kg	795 kg	809 kg	1,726 kg	269 kg
	E-waste	62,335 kg	57,520 kg	35,312 kg	38,159 kg	30,682 kg
	Fluorescent light bulbs	58,225 ft	69,222 ft.	36,427 ft.	46,249 ft.	58,291 ft.
	Lead-acid batteries	3,134 kg	3,069 kg	2,300 kg	3,093 kg	1,727 kg
	Mercury bulbs	822 units	1981 units	2431 units	2321 units	1,481 units
	Paint	2,166 kg	2,115 kg	1,520 kg	1,340 kg	2,720 kg
	Scrap metal	21,704 kg	29,616 kg	<b>38,332 kg</b>	25,808 kg	20,726 kg
	Oil	2,400 L	1,400 L	1,000 L	1,800 L	1,200 L
<b>Incineration / Landfill</b>	Biomedical animal	16,542 kg	12,294 kg	14,504 kg	15,604 kg	12,695 kg
	Biomedical cytotoxic	11,986 kg	11,383 kg	<b>9,895 kg</b>	N/A	N/A
	Biomedical non-anatomical	33,250 kg	33,916.3 kg	<b>35,380 kg</b>	<b>42,740 kg</b>	54,403 kg
	Cyanides and reactives	81 kg	133 kg	158 kg	191 kg	174 kg
	Cylinders	117 units	0 units	15 units	38 units	24 units
	Liquid scintillation cocktails	0 L	0 L	0 L	320 L	200 L
	Other hazardous solids	880 kg	2,000 kg	1,200 kg	2,110 kg	2,080 kg
	Other hazardous liquids	100 L	1,200 L	572 L	1,200 L	400 L
	PCB ballast	800 kg	480 kg	522 kg	716 kg	463 kg
	Solvents	40,030 L	34,720 L	35,040 L	<b>34,000 L</b>	49,280 L
<b>Neutralization</b>	Corrosive liquids	14,760 L	13,920 L	13,700 L	10,800 L	13,360 L
<b>Regular waste</b>	Decayed radioactivity	0 kg	650 kg	1392 kg	1,516 kg	2,258 kg

While the numbers are consistent with those of previous years, there has been an increase in the volume of old electronic equipment, as well as pressurized gas cylinders. Implementation of the IT Asset Management Regulation as well as extensive promotion of our recycling program may have contributed to the increase in volume collected. We did not dispose of cylinders last year, which explains why the numbers went up last fiscal year.

## **5 EMERGENCY MANAGEMENT & PREPAREDNESS**

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### **5.1 University Emergency Notification System**

The goal of McGill's emergency notification system (ENS) is to ensure that as many people as possible can receive urgent safety information during an emergency. Alerting tools include push notifications through the McGill App, SMS/text notification through Mir3, desktop pop-up messages through Alertus, Alnote email messages, the www.mcgill.ca website, and social media (McGill Twitter and Facebook). The Emergency Notification Working Group (comprised of members of EMP and Communications & External Relations) completed the Emergency Notification System (ENS) Protocol. This year, EMP is completing an ENS needs assessment to look into long-term technological improvements. Alternative methods of notification are being explored due to the eventual phase out of the Mir3 SMS/text notification system.

Two bi-annual system tests were conducted in November 2018 and May 2019 to ensure system readiness.

### **5.2 Emergency Planning and Preparedness**

The Emergency Management and Preparedness (EMP) unit engages in ongoing emergency planning and preparedness activities. In addition to annual reviews of all major emergency response plans (i.e., University Emergency Response Plan, Ammonia Leak Response Plans, Convocation Emergency Plan, Emergency Notification Protocol), unit members continue to work with the cross-university Travel Emergency Work Group to annually review emergency procedures for travel-related emergencies. EMP conducted two debriefs following major incidents to promote continuous quality improvement across McGill's emergency responder groups.

## **6 FIRE PREVENTION**

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### **6.1 Fire Alarms**

The City of Montreal imposes an incremental fine structure for unfounded fire alarms that occur at each civic address. Fines range from \$0 for a first alarm, to \$250 for the second, \$750 for the third, and up to \$2700 for the fourth and above. In order to reduce the number of unfounded fire alarms on campus and to defray the costs of those that continue to occur, the Fire Prevention Office imposes a penalty of \$3000 per unfounded fire alarm.

From May 1<sup>st</sup> 2018 to April 30<sup>th</sup> 2019, the Fire Prevention Office (FPO) received 71 notices for unfounded fire alarms from the City of Montreal, a decrease of 1 unfounded alarm compared to the previous operating year. The FPO contested three of the fines, and although the City of Montreal did not approve any of the three contestations, only one fine resulted in a fee of \$2,700.

**Figure 9**

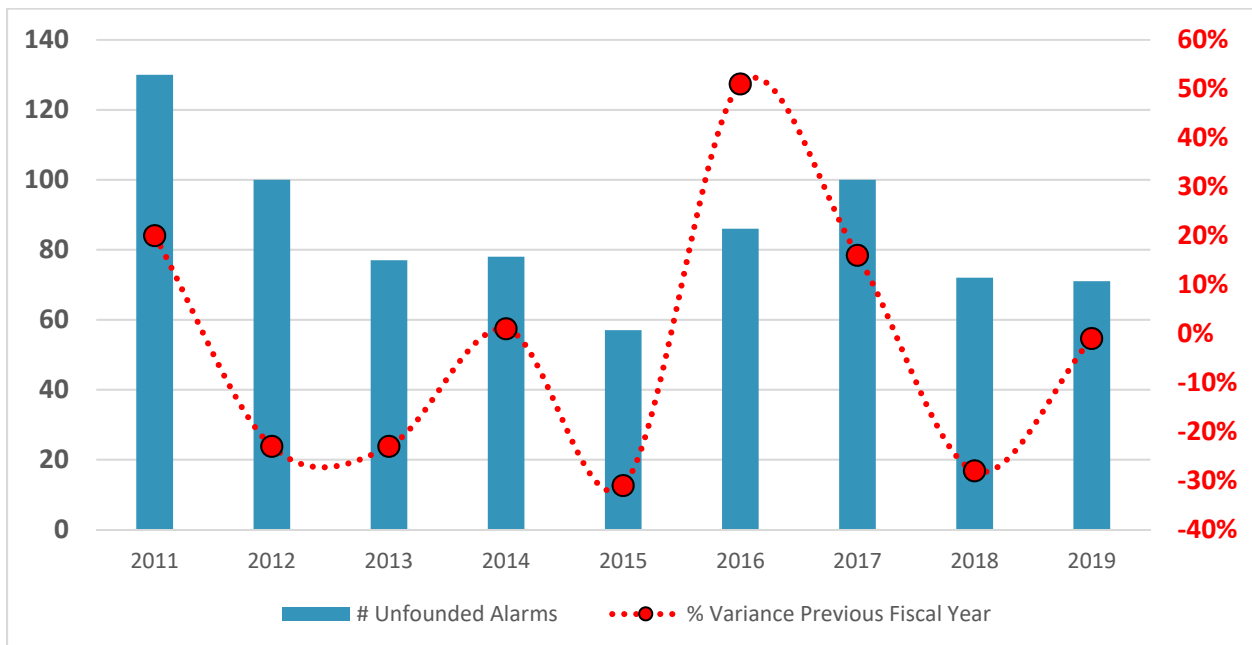
**Number of Municipal Notices for Unfounded Alarms, by Location, Occurrence and Operating Year**

Location	2018-2019		2017-2018		2016-2017		2015-2016	
	Unfounded Alarms	%	Unfounded Alarms	%	Unfounded Alarms	%	Unfounded Alarms	%
Downtown Campus Buildings*	52	74	46	64	46	46	43	50
Macdonald Campus Buildings*	0	0	1	1	4	4	10	12
Montreal Neurological Institute	9	13	10	14	15	15	16	19
Residences	7	10	13	18	28	28	17	20
Molson Stadium	2	3	2	3	7	7	0	0
<b>Total</b>	<b>71</b>	<b>100</b>	<b>72</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>86</b>	<b>100</b>
<b>Frequency</b>								
First	22	31	21	29	29	29	31	36
Second	8	11	11	16	15	15	13	15
Third	7	10	6	8	15	15	8	9
Fourth	3	4	5	7	10	10	3	3
Fifth and higher	31	44	29	40	31	31	31	36
<b>Total</b>	<b>71</b>	<b>100</b>	<b>72</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>86</b>	<b>100</b>

\* Downtown and Macdonald Campus buildings excluding Residence buildings.

**Figure 10**

**Incidences of Unfounded Alarms per Fiscal Year—and % Variance Previous Fiscal Year**

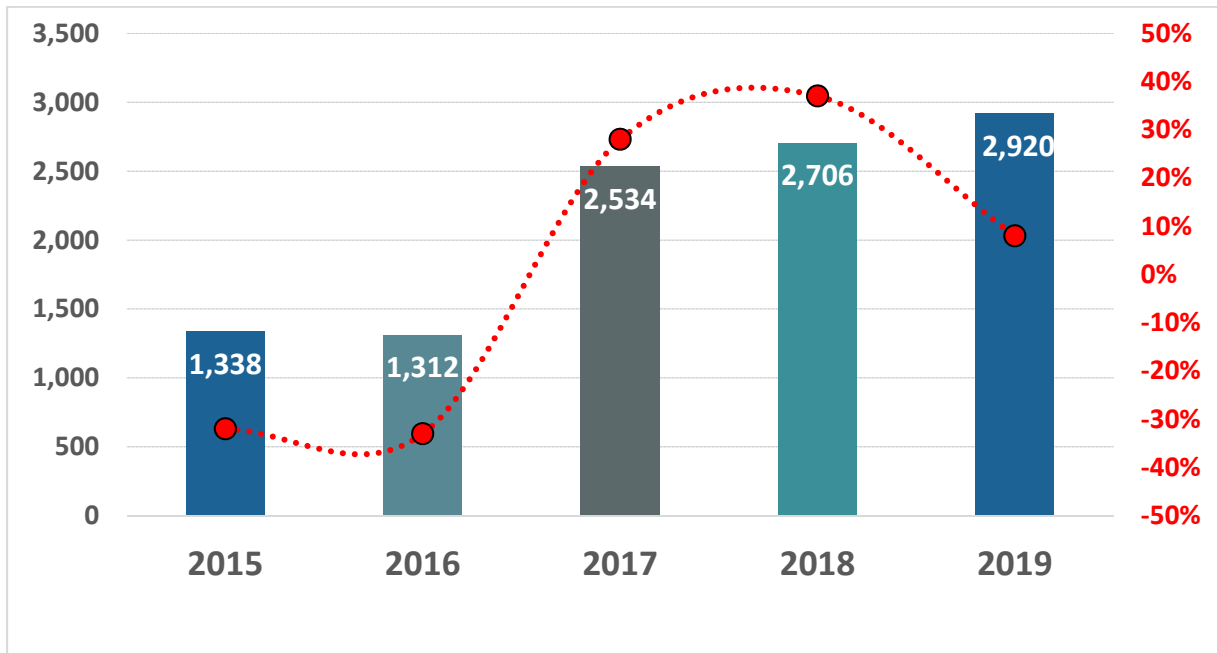


## 6.2 Reasons for Fire Alarms

Over the operating period following the rollout of the safety permits for Fire Protection Equipment Shutdowns (FS-002) and Hot Work in May 2014, incidences of unfounded alarm notices dropped 45% in 2019. When averaged over time, the University records 86 incidences of unfounded alarms per operating period. For the period from May 2018 to April 2019, the number was 71 — that is, 17% below average. One reason for this decrease, despite the ongoing increase of construction work, is shorter equipment inspections cycles — that is, the number of months required to inspect all fire safety equipment, such as fire alarms systems, detection, protection, and suppression systems — which have been falling steadily. Shorter inspections cycles translate into faster turnaround times for equipment repairs which lead to fewer alarms triggered by equipment deficiencies.

**Figure 11**

**Number of Equipment Shutdown Requests (FS-002) per Fiscal Year—and % Variance Yearly Average**



Changes in data collection processes have led to a revision of the data added to this report for previous years.

**Figure 12** Number of Equipment Shutdown Requests (FS-002) per Quarter—and % Variance Quarterly Average



### 6.3 Building Evacuation Exercises

The Fire Prevention Office conducted fire drills in 139 out of 147 required buildings (not including three buildings that were empty during the drills period) for a success rate of 95%. Of the eight remaining buildings, seven were under construction and unoccupied; and a fire alarm in the remaining building triggered an emergency evacuation that met the objectives of the exercise.

### 6.4 Fire Equipment Upgrades Program

The Fire Prevention Office has embarked on a comprehensive project to replace outdated fire alarm systems and alarm transmitter boxes. Forty fire systems have been identified as priorities based on an equipment risk assessment which evaluates system type, age of equipment, building occupancy, and equipment deficiencies (such as deficiencies frequency, severity, and detectability), as well as cost. See the list of equipment upgrades status below. Fiscal years indicate period during which work was completed or year planned for work to be performed. Note that next-generation fire alarm systems and transmitter boxes require IP line connectivity.

## 7 SECURITY SERVICES

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### 7.1 Calls to the Security Operations Centre (Downtown & Macdonald Campus)

Figure 13 summarizes the incident reports triggered by calls and alarms recorded by the Security Services Operations Centre (SOC) on the Downtown and Macdonald campuses from 2016 to 2019.

#### Downtown Campus

The SOC downtown received, on average, 320 calls a week compared to 361 last reporting year, representing a 12% drop in the volume of reported incidents. While there was an overall drop in incident reports triggered by calls and alarms, in the category of Provide Assistance, there was a 43% increase in the number of transports by our mobility assistance service due largely to improved efficiency in the delivery of this service. The increase in adapted transport services was offset by a decrease of 30.8% in “Unsecured Areas” and a decrease of 23% of “Alarms” from last year. The decrease in the reporting of “Unsecured Areas” and “Alarms” can be somewhat attributed to a protracted period where we experienced a lack in resources at our SOC. During that time, Controllers would send agents to respond to alarms, but they did not necessarily generate a report (or log) in HEAT (Security Services Incident logging system). While the constraint on our resources is returning to an acceptable but not optimal level, it does illustrate the significance of the high overhead generated in terms of operational efficiency by using HEAT. The purchase of the new Incident Management System (IMS) will help our Operations Centre deal in a more efficient manner with our ever growing number of alarms and calls. Refer to figure 13 below for a more detailed look at criminal incidents.

#### Macdonald Campus

There was a slight decrease of 16% in “Unsecured Area” alarms as compared to last year, attributed to ongoing efforts in educating and promoting safety initiatives across various campus units. Further to Security initiatives, the total number of calls received by the Macdonald Campus SOC decreased from an average of 72 a week last year to an average of 62 a week this year, a decrease of 14%. Notably, the decrease occurred primarily in the following categories: “Alarms” (40%), “Provide Assistance” (12%), and “Miscellaneous” (10%). With regards to the category Miscellaneous, a new digital process for municipal parking infractions accounts for almost 78% of all the incidents in this category. Additionally, Macdonald campus is seeing a noticeable jump in the volume of traffic and the accompanying parking incidents requiring the assistance of our Security Staff. Moreover, increased traffic due to ongoing construction around the campus has resulted in the need for more resources for traffic and safety control across campus.



**Figure 13**

**Incident Reports Triggered by Calls and Alarms Received by Security Services on the Downtown and Macdonald Campuses, by Fiscal Year**

	2018-2019				2017-2018				2016-2017				2015-2016			
	Downtown		Macdonald		Downtown		Macdonald		Downtown		Macdonald		Downtown		Macdonald	
	Yearly Totals	Weekly Avg.	Yearly Totals	Weekly Avg.	Yearly Totals	Weekly Avg.	Yearly Totals	Weekly Avg.	Yearly Totals	Weekly Avg.	Yearly Totals	Weekly Avg.	Yearly Totals	Weekly Avg.	Yearly Totals	Weekly Avg.
Unsecured Areas <sup>(1)</sup>	970	19	174	3	1,402	26	208	4	1,265	24	217	4	1,271	24	285	5
Alarms <sup>(2)</sup>	5,147	99	214	4	6,718	129	358	7	6,383	123	302	6	6,056	116	366	7
Emergency Calls <sup>(3)</sup>	517	10	76	2	515	9	84	2	558	11	68	1	504	10	71	1
Criminal Incidents <sup>(4)</sup>	234	4	42	1	243	4	55	1	273	5	93	2	465	9	79	2
Provide Assistance <sup>(5)</sup>	9,675	186	450	8	9,970	191	508	10	8,197	158	382	7	8,263	158	427	8
Miscellaneous <sup>(6)</sup>	77	1	2,300	44	137	2	2,516	48	309	6	1,324	25	393	8	2,002	39
<b>Total</b>	<b>16,620</b>	<b>319</b>	<b>3,256</b>	<b>62</b>	<b>18,985</b>	<b>361</b>	<b>3,729</b>	<b>72</b>	<b>16,985</b>	<b>327</b>	<b>2,386</b>	<b>45</b>	<b>16,952</b>	<b>326</b>	<b>3,255</b>	<b>63</b>

Context for Incident Categories:

- (1) Open doors, windows and buildings that are meant to be secured.
- (2) Unauthorized exit/entry, fire panel trouble, PC tab alarm etc.
- (3) Disturbance or emergency situation.
- (4) Criminal act or attempted criminal act.
- (5) Safety hazards, security risks, parking issues, lost & found etc.
- (6) Rule violation, non-criminal mischief, criminal information, etc.
- (7) All averages are rounded up to the nearest whole number.

## 7.2 Reported Criminal Incidents (Downtown & Macdonald Campus)

A detailed breakdown of crime-related incidents for this and the previous three years is shown in Figure 14 on the following page. It is noteworthy to mention that there are no national standards governing the reporting and classification of crime statistics for Canadian post-secondary institutions and therefore these statistics are compiled by Security Services.

### Downtown Campus

This year there were 234 reported criminal incidents, a decrease of 3.7% overall on the downtown campus compared to the previous reporting period of 2017-18. The notable trend that we observe this year is a rise in the number of incidents dealing with “Threats or Harassment”, from a 5-year average of 9 incidents per year to 20 reported incidents of “Threats or Harassment” in this reporting year. Of note, of those 20 reported incidents, 6 incidents alone had to do with one individual calling our emergency number repeatedly (representing 30% of all of those reported incidents). Nonetheless, when these incidents do occur, our staff are trained to offer our conflict resolution workshop. The workshop, called De-escalating Potentially Violent Situations, is regularly scheduled throughout the year and is easily accessed on the HR Staff Development Courses website. The other notable trend we can observe from Figure 14 in our criminal statistics breakdown, is a decline in the subheading of “Incidents against Good Order”. Here, we see that there was an overall decline of 43.5% (which includes “Indecent Exposure or Peeping”, “Altercation or Drunkenness”, “Drug or Liquor Law Violation” and “Other”) from 16 incidents last year to 9 incidents this reporting period.

As is the case each year, the largest single category in terms of criminal activity on campus is that of “Theft under \$5000”, comprising 73%, or 171 of the criminal incidents on campus. The location which experienced the most thefts was the McGill Sports Complex with 25 incidents, representing 14.6% of all thefts on campus. The men’s locker room is the area most vulnerable to theft, responsible for 22 of the 25 incidents (the remaining 3 incidents occurring in the women’s locker room). It is hoped that with current improvements underway at the gym, such as the securing of all perimeter doors, there will be a positive effect on the rate of thefts.

The second most affected location was Carrefour Sherbrooke Residence with 22 incidents at its cafeteria and Starbucks locations; these areas accounted for 12.8% of all thefts downtown. If we combine all of the residence cafeterias and regard them as a “location” targeted for theft, the 28 incidents of thefts at these locations represent 16.3% of all thefts on the downtown campus, making them our number one “hotspot”. Because the cafeterias are open to the public and are very popular among both staff and students, they are busy and make ideal locations for professional thieves. Every year we create specialized messaging to alert our community of the thefts in these areas but they remain nonetheless high target areas. Because of the high volume of thefts at Starbucks, cameras were installed to help as an investigative tool. With images of the thefts, our Criminal Investigator is better able to provide and collaborate with the Montreal Police with footage for their own investigations.

The social science and law libraries (McLennan, Redpath and Gelber) accounted for 19.1% of theft where the overwhelming majority of items stolen were laptops. The observed pattern of these thefts involves students leaving their laptop to go to the washroom, answer their cellphones or leave to get food or coffee. In an effort to reduce thefts at the library, the Community Relations unit performs spot checks at busy times of the year and places post-it booklets on unattended laptops. The idea is to remind students of the problem of theft and to influence their behavior with regards to prevention and awareness.

The music buildings (Strathcona Music and Elizabeth Wirth buildings) represented 2.3% of the thefts on campus and we are happy to report that theft in these areas are down from 9% compared to last year.

Finally, 8.7% (or 15) of all incidents occurred on our grounds (bicycle racks, grounds, Roddick and Milton Gates).

In terms of what was stolen, there were 63 incidents involving the theft of laptops and 38 incidents involving the theft of cash or wallets. Together, the theft of laptops and cash represent 59% of all theft. At 15 stolen items, backpacks accounted for 8.7% of all thefts, 10 stolen bicycles accounted for 5.8% of the theft (down from 16 last year), 9 cellphones accounted for 5.2% of the theft, and 7 items classified as electronic devices

comprised 4% of all theft. Finally, 29 items, or 16.9% of the stolen items, are classified as miscellaneous ranging anywhere from minor food items or designer jackets to construction or office equipment). In terms of targeted prevention efforts, we continue to collaborate with the Montreal police to bring free bicycle engraving events at strategic times of the year as well as promote our anti-theft device installations for laptops throughout the year and during orientation activities and events. This year we also created and installed posters and stickers around campus specially designed for lockers. The purpose of the posters and stickers is to alert our student population that valuables should never be stored in lockers, so that while this year there were only 2 incidents of locker theft outside of the gym we want to ensure that our student population is adequately apprised of the potential for theft. All of these targeted efforts, along with our normal prevention activities, are key in establishing a culture of safety to ensure that, whether they are working or studying, our community has a positive experience at McGill.

### **Macdonald Campus**

There was a 24% decrease in criminal incidents from the previous reporting period at Macdonald campus. Most notably, there was a 50% decrease in incidents of “Trespassing” and an 18% decrease in the category of “Thefts under \$5000”. There was also a 33% decrease in the number of Liquor Law Violations, as well as a marked decrease of 29% in the category of “Other” (mostly arising from incidents of “Hit and Run” where parked cars received minor damages).

**Figure 14 Summary of Reported Criminal Incidents, by Fiscal Year**

	2018-2019				2017-2018				2016-2017				2015-2016			
	McGill University	Off Campus	Mac Campus	Mac and JAC	McGill University	Off Campus <sup>2</sup>	Mac Campus <sup>3</sup>	Mac and JAC <sup>3</sup>	McGill University	Off Campus	Mac Campus	Mac and JAC	McGill University	Off Campus	Mac Campus	Mac and JAC
<b>Incidents against Property</b>																
Theft of over \$5000	0	1	0	0	3	0	2	0	4	0	0	0	2	0	0	1
Theft of under \$5000	171	6	14	49	173	4	17	55	163	4	22	49	302	3	24	54
Break and Enter	2	0	8	8	13	0	2	2	8	1	2	1	60	2	9	1
Computer Crime	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Fraud	0	2	0	1	1	0	1	1	0	1	0	3	0	0	2	2
Mischief	18	1	3	4	10	0	2	0	24	0	4	6	36	1	0	5
Trespassing	0	0	2	3	0	0	6	6	0	0	18	0	1	0	9	2
Arson	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Attempted Incidents against Property	9	0	5	7	17	0	1	1	6	2	3	2	22	0	2	0
<b>Total</b>	<b>200</b>	<b>10</b>	<b>32</b>	<b>72</b>	<b>217</b>	<b>4</b>	<b>31</b>	<b>65</b>	<b>206</b>	<b>8</b>	<b>50</b>	<b>61</b>	<b>423</b>	<b>6</b>	<b>47</b>	<b>66</b>
<b>% of Total Crime</b>	<b>85.4%</b>	<b>41.7%</b>	<b>51.0%</b>	<b>74.0%</b>	<b>89.3%</b>	<b>36.4%</b>	<b>47.7%</b>	<b>73.0%</b>	<b>79.6%</b>	<b>57.1%</b>	<b>61.7%</b>	<b>62.9%</b>	<b>93.6%</b>	<b>46.1%</b>	<b>61.0%</b>	<b>66.7%</b>
<b>Incidents against the Person</b>																
Assault	4	3	0	0	6	3	0	1	6	1	3	1	8	0	1	0
Threats or Harassment	20	10	1	1	1	2	1	0	19	2	0	0	10	4	4	5
Mugging or Robbery	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	1
Sexual Assault	1	0	1	1	2	0	0	1	2	1	0	0	2	0	0	0
Homicide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>25</b>	<b>14</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>7</b>	<b>1</b>	<b>2</b>	<b>27</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>20</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>% of Total Crime</b>	<b>10.6%</b>	<b>58.3%</b>	<b>4.0%</b>	<b>3.0%</b>	<b>4.1%</b>	<b>63.6%</b>	<b>1.5%</b>	<b>2.2%</b>	<b>10.4%</b>	<b>28.6%</b>	<b>3.7%</b>	<b>1%</b>	<b>4.4%</b>	<b>30.8%</b>	<b>6.5%</b>	<b>6.1%</b>
<b>Incidents against Good Order</b>																
Indecent Exposure or Peeping	9	0	0	4	9	0	1	0	15	1	1	1	3	1	2	1
Altercation or Drunkenness	0	0	5	6	1	0	0	2	1	0	2	1	3	1	6	1
Bomb Threat	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Drug or Liquor Law Violation	0	0	2	3	2	0	3	10	2	0	11	13	0	0	9	14
Weapons Law Violation	0	0	1	0	0	0	1	0	1	0	1	0	0	1	0	0
Other	0	0	20	10	4	0	28	10	6	1	13	20	3	0	8	10
<b>Total</b>	<b>9</b>	<b>0</b>	<b>28</b>	<b>23</b>	<b>16</b>	<b>0</b>	<b>33</b>	<b>22</b>	<b>26</b>	<b>2</b>	<b>28</b>	<b>35</b>	<b>9</b>	<b>3</b>	<b>27</b>	<b>27</b>
<b>% of Total Crime</b>	<b>4.0%</b>	<b>0%</b>	<b>45.0%</b>	<b>23.0%</b>	<b>6.6%</b>	<b>0%</b>	<b>50.8%</b>	<b>24.8%</b>	<b>10%</b>	<b>14.3%</b>	<b>34.6%</b>	<b>36.1%</b>	<b>2%</b>	<b>23.1%</b>	<b>32.5%</b>	<b>27.2%</b>
<b>TOTAL NUMBER OF RECORDED INCIDENTS</b>	<b>234</b>	<b>24</b>	<b>62</b>	<b>97</b>	<b>243</b>	<b>11</b>	<b>65</b>	<b>89</b>	<b>259</b>	<b>14</b>	<b>81</b>	<b>97</b>	<b>452</b>	<b>13</b>	<b>79</b>	<b>99</b>

(1) These statistics represent only those incidents that were reported to McGill Security Services.

(2) "Off Campus" incidents refer to incidents occurring adjacent to McGill property.

(3) Macdonald Campus is shown in two columns. "Mac Campus" indicates incidents that occurred on Mac Campus property, and "Mac and JAC" indicates incidents that occurred on the joint Macdonald - John Abbott College (JAC) property.

### 7.3 Benchmarking Criminal Incidents

The Criminal Incidents Index (CII) measures the number of criminal incidents on both McGill campuses per 1,000 students over a specified fiscal year, compared to eight other Canadian universities whose student populations exceed 20,000 and for which criminal incidents data are available. Campus Public Safety relies on its own resources to collect this data given that there is no national body that publishes such statistics. Universities publish their own statistics with considerable delay and, as a result, the CII cites statistics for the previous fiscal year, 2017-2018. As a result of this delay the statistics for McGill University are for the fiscal year 2017-2018 and thus do not match the current year statistics presented elsewhere in this report.

Note that these statistics are calculated based on individual interpretation of annual reports published online by the various listed universities. The definition of criminal incidents and how statistics are categorized across each university may vary.

**Figure 15** Criminal Incidents Index (CII), by Fiscal Year

University	2017-2018			2016-2017			2015-2016		
	Total Criminal Incidents	Student Population <sup>(1)</sup>	Criminal Incident Index (by 1,000 Students)	Total Criminal Incidents	Student Population <sup>(1)</sup>	Criminal Incident Index (by 1,000 Students)	Total Criminal Incidents	Student Population <sup>(1)</sup>	Criminal Incident Index (by 1,000 Students)
<b>McGill University</b>	<b>308</b>	<b>40,036</b>	<b>7.7</b>	<b>356</b>	<b>40,971</b>	<b>8.7</b>	<b>531</b>	<b>40,493</b>	<b>13.1</b>
McMaster University	523	31,485	16.6	531	29,336	18.1	436	27,987	15.5
Queen's University <sup>(3)</sup>	374	24,143	15.5	480	24,143	19.8	315	22,461	14.0
University of Alberta <sup>(3)</sup>	823	39,432	20.9	781	38,311	20.4	567	37,380	15.2
University of British Columbia <sup>(2)</sup>	553	64,900 <sup>(4)</sup>	8.5	495	62,923 <sup>(4)</sup>	7.8	435	61,113 <sup>(4)</sup>	7.1
University of Toronto <sup>(2)(3)</sup>	1,462	90,077	16.2	790	61,339	12.8	564	60,595	9.3
University of Waterloo <sup>(2)(3)</sup>	325	18,658	17.4	481	34,325	14.0	557	36,670	15.2
York University	615	55,700	11.1	905	52,300	17.3	714	52,300	13.7
	Average		14.2	Average		14.8	Average		13.3

- (1) All student population data extracted from university websites.
- (2) Annual security reports represent a calendar year.
- (3) Statistics are for the 2018 calendar year.
- (4) UBC population data reflect both Vancouver and Okanagan campuses.

## 8 2018-2019 SAFETY ACTIVITIES

### 8.1 McGill Safety Training

Figure 16 on the following page summarizes the safety training sessions provided by the various McGill safety units between May 1<sup>st</sup> 2018 and April 30<sup>th</sup> 2019.

The EHS unit introduced three new training sessions:

- 1) “WHMIS Lite”, a shorter version of the WHMIS course for undergraduate students who are not legally required to take this training but who can benefit from it in courses involving special project and lab work.
- 2) A laboratory safety orientation video created for graduate students.

**Figure 16 Safety Training Sessions Conducted by McGill Safety Units, by Fiscal Year**

S: Sessions P: Participants	2018-2019		2017-2018		2016-2017		2015-2016	
	S	P	S	P	S	P	S	P
Ammonia Leak <sup>2</sup>	1	7	0	0	0	0	2	15
Asbestos Awareness Session	0	0	1	14	0	0	1	25
Asbestos General Training <sup>1</sup>	6	131	3	27	3	41	7	96
Asbestos High Risk Management	0	0	2	15	1	24	1	7
Biosafety for Manager <sup>2</sup>	0	0	0	0	0	0	6	63
Cardiopulmonary Resuscitation (CPR)	0	0	0	0	0	0	1	8
Confined Space Awareness for Manager	n/a	n/a	0	0	1	13	n/a	n/a
Ergonomic Workshop for HR Advisor <sup>2</sup>	1	0	0	0	0	0	2	11
Ergonomic Workshop for Staff	5	52	n/a	n/a	n/a	n/a	n/a	n/a
First Aid in the Workplace	18	241	19	187	15	166	19	184
Good microbiological practices	1	30	n/a	n/a	n/a	n/a	n/a	n/a
Guest Lecture <sup>3</sup>	2	67	2	16	1	85	1	70
Hazardous Waste Training for Lab Personnel <sup>3</sup>	5	207	5	212	6	188	7	245
Hazardous Waste Training – Web Training <sup>3</sup>	18	528	19	396	19	338	14	251
In-Person EHS sessions or certifications <sup>5</sup>	12	61	12	179	12	63	12	122
Internal Responsibility Laboratory Managers	2	50	0	0	1	17	2	57
Internal Responsibility Managers & Supervisors	1	37	1	21	3	54	0	0
IRS - Enforcement Workshop <sup>2</sup>	n/a	n/a	0	0	0	0	1	13
Introduction to Biosafety <sup>1</sup>	16	859	18	726	14	627	13	558
Laser Safety <sup>1</sup>	5	205	6	162	6	188	5	99
Laser Safety Online Refresher	2	7	n/a	n/a	n/a	n/a	n/a	n/a
Lock out Tag out (LOTO)	0	0	0	0	4	57	0	0
myLab (Chem Module)	4	72	5	111	8	172	9	172
myLab (Rad Module)	0	0	1	10	0	0	1	3
N95 Respirator Fit Testing	9	13	0	0	0	0	0	0
Powered Air Purifying Respirators (PAPR)	0	0	0	0	0	0	1	2
Radiation Safety <sup>1</sup>	3	46	5	69	3	44	4	43
Radiation Safety Web Refresher Training <sup>1</sup>	6	13	3	16	7	24	7	40
Radiation Safety Awareness	n/a	n/a	0	0	0	0	1	2
Respirator Fit Testing	13	31	13	56	9	42	4	13
Safeguarding Science (PHAC) <sup>2</sup>	n/a	n/a	0	0	0	0	1	25
Safe Use of Biological Safety Cabinets <sup>1</sup>	13	563	14	491	12	440	12	444
Safe Use of Biological Safety Cabinets Online Refresher	7	89	n/a	n/a	n/a	n/a	n/a	n/a
Santé et sécurité général sur les chantiers de construction (ASP)	2	46	3	41	2	24	1	7
Town Hall <sup>4</sup>	3	390	0	0	0	0	1	27
Transports of Dangerous Goods Class 2 to 9 – ground shippers and drivers	1	4	n/a	n/a	n/a	n/a	n/a	n/a
Transports of Dangerous Goods Class 6.2 – Infectious Substances	1	3	1	5	1	32	n/a	n/a
Type A Package Training (Radiation) <sup>1</sup>	0	0	0	0	0	0	1	10
WHMIS for Lab Personnel <sup>1</sup>	29	1,996	16	673	23	1,163	25	1,308
WHMIS for Lab Personnel Web Training <sup>1</sup>	n/a	n/a	24	1,380	32	1,316	22	841
WHMIS for Non-Lab Personnel	0	0	0	0	0	0	6	103
WHMIS-2015 for Lab Personnel	n/a	n/a	16	1,191	n/a	n/a	n/a	n/a
Active Shooter Protocol Training	3	87	2	30	6	154	4	67
De-escalating Potentially Violent Situations (previously NVCI)	5	90	6	90	0	0	4	48
Event Security Presentation	8	31	3	16	6	19	6	19
RAD (Rape Aggression Defense)	2	24	4	40	6	55	4	35
Incident Command System (all levels)	8	99	6	141	3	121	6	128
Emergency Management 101	1	22	n/a	n/a	n/a	n/a	n/a	n/a
Emergency Operations Centre (EOC)	3	26	1	13	1	37	1	24
Emergency Notification Initiator Exercises	6	14	6	14	6	21	n/a	n/a
Evacuation Teams	18	402	20	295	26	453	25	392
Fire Extinguisher Training	2	14	n/a	n/a	3	27	3	19
Hot Work Web Training	n/a	22	n/a	14	n/a	19	n/a	9
Hot Work Classroom Training	6	22	4	14	4	21	3	9
<b>Total</b>	<b>248</b>	<b>6,601</b>	<b>241</b>	<b>6,665</b>	<b>244</b>	<b>6,045</b>	<b>249</b>	<b>5,734</b>

1 Mandatory training includes an examination to establish competency  
2 Session provided upon request  
3 Title of seminar: Occupational Health & Safety for Food Science Students, presented by Wayne Wood  
4 Safety related Town Hall sessions  
5 This category regroups all types of sessions from exam rewrite and refresher training, to first time safety training certificates

## 8.2 2018-2019 Highlights

### 8.2.1 Environmental Health and Safety

#### Environmental Health & Safety

This year marked the first full year of the revamped course in the Workplace Hazardous Materials Information System (WHMIS) to bring it in line with the Globally Harmonized System. Approximately 2,000 people attended the new course. Overall, there were 5,748 registrations in EHS safety courses.

Further to the 2017 Internal Audit and as of the current year, all of the “high risk” and the “moderate risk” issues have already been addressed or are part of an action plan. The outstanding items remaining to be addressed relate mostly to IT support, including the need for a new call ticket system, an incident tracking system to enable statistical analysis, and the new course registration and training management system to be instituted by HR at the time of the launch of R2R.

In March, Internal Audit completed an audit of asbestos processes at McGill. While not an audit of EHS per se, EHS was the main stakeholder in most of the findings and the principal driver in preparing the action plan. There were no major gaps in the management of asbestos, and McGill is in good standing with the regulatory agency, the CNESST. Most of the findings related to quality control issues and identified the need to devote more time to asbestos management. One of the outcomes of the action plan was the hiring of a full-time professional to advance asbestos management, as well as the regularizing of one technician who was previously on contract.

EHS used the new risk-based assessment tool to assist in retrofitting older laboratories with their needs for emergency eye wash and shower units. Retrofits are planned for the Strathcona Anatomy and Dentistry Building and for all the laboratory buildings at Macdonald campus.

The MNI discontinued its service level agreement with EHS to provide some radiation protection oversight services. EHS will maintain the responsibility for managing the licensing for and conducting radiation lab inspections in 5 research labs at the MNI, while the MNI resumes oversight responsibility for the MNI Cyclotron and the Positron Emission Topography Unit.

EHS has obtained the equipment and developed the capacity and credentials to provide in-house fit testing for employees who wear respirators. Three EHS McGill employees have successfully been certified to perform the fit tests, as a result, EHS has now begun the service of conducting fit tests for employees who work around asbestos, animal care workers, operators who work around chemical fume hoods, hazardous waste handlers, and emergency handlers. This alleviates the need to hire a private contractor every time McGill issues a respirator.

#### Hazardous Waste Management

On June 15<sup>th</sup> 2018, HWM performed a simulation of the Emergency Response Assistance Plan (ERAP) at Macdonald Campus. This plan is required by McGill to transport large amounts of radioactive wastes on public roads and must be maintained and reviewed on a regular basis.

As requested by the McGill Internal Audit group, HWM has revised the Standard Operating Procedure (SOP) that illustrates the processes necessary for acquiring, storing, using, and discarding controlled substances. Plans are being developed to hold an information campaign for researchers in the coming fiscal year.

After a visit from the Service de sécurité incendie de Montréal (SIM), HWM adapted the hazardous waste storage facility to improve compliance with the fire code.

Funding was approved for the Biomedical Waste Sterilization System (BWSS) project. The call for tender for the purchase of the BWSS is imminent.



## 8.2.2 Campus Public Safety

### Security Services

This past year, Security Services continued to work on an Incident Management System (IMS) proposal in collaboration with IT Services and Procurement for the eventual purchase of an IMS software, securing funding from the Senior Administration of the University in order to move forward.

Similarly, the preliminary phase for the eventual rental of two-way radios was initiated with the preparation of a Notice of Request for Interest. The purpose of this step is to identify and examine the different types of two-way radios on the market, evaluating them for reliability and new technology, as the radios are used 24/7, 365 days/year by security personnel.

As 2018-2019 saw the end of the agency contract with Securitas, a call for tender was launched for a new five-year contract for the services of a security agency to maintain campus public safety. After analysis of the bids received by Procurement to establish conformity of the lowest bidder, the contract was awarded to GardaWorld, commencing 01 June 2019.

Security Services acquired a new Round Witness System (RWS) with smartphone, an enhanced approach using real time with GPS function. This improved product will increase patroller efficiency and response time as they perform their rounds. As well, a contract was signed with a new local provider, resulting in significant cost savings.

In response to an event that took place with little warning in November 2016, resulting in a dangerous situation of overcrowding, Campus Public Safety was invited by Robert Couvrette in 2017 to bring together subject matter experts from various units to review the University's event booking processes. The objective of this collaborative effort was to propose an action plan, including drawing up a new Directive and Policy to streamline the process and mitigate risks. Two subgroups were formed to produce the documents, a Policy/Directive group and an Operations/Procedures group. The final versions are expected to be delivered to Senior Administration in the Fall of 2019.

On the downtown campus, new bollards were installed at McTavish Gates to protect the access point between McTavish and lower campus from vehicular access by community members and visitors. The bollards at this location were functional as at 17 July 2019. A project to install bollards at Milton Gates was originally planned for the summer of 2019, but was postponed in part due to the multiple construction projects being executed in the same sector of the campus during the 2019 summer months and because it is now being integrated into the Wilson Hall project, which is expected to mobilize in late 2020 or early 2021.

The Physical Security Systems unit has continued its efforts to replace all blank access cards (BAC) on campus with user-restricted access cards specific to visitor, casual, or service provider use. This year alone saw a reduction of 1,700 BACs, for a total of 28% fewer cards in circulation since the internal audit was performed in 2018. In order to further reduce the number of active blank access cards still in use, McGill Service Provider (MSP) badging was expanded and there was a substantial increase of 81% MSPs this year, compared to 2017. The unit also established the need for new hardware standards for classroom locks/securitization. As a result, all classroom renovations will now include the installation of "shelter-in-place" hardware. Another unit objective this year included a project to improve CCTV coverage at both the downtown and Macdonald campuses, now already at 75% completion. Macdonald campus Security Device Requests (SDR) have been fully integrated into the downtown system and now follow the same process of installation and inspection.

In line with harmonizing same standards between the downtown and Macdonald campuses, the Community Relations Unit worked with Graphics McGill to better feature the map of Macdonald campus on the popular wallet-sized resource. The night route map is one of our principal resources at tabling and community outreach events, providing not only the recommended routes to use at night but also valuable contact information on a variety of emergency resources.

A new laminated poster was created to better guide the McGill community in emergency call procedures by being placed near entrances or important exits in all McGill buildings for the highest visibility. All the downtown posters have been put up, with the exception of McGill residences, which are in the process of being installed and are approximately 80% complete. As for the progress at Macdonald campus, poster installation is near completion at 90%.

In collaboration with Graphics McGill, the Community Relations Unit also created new print assets to address the potential for locker theft on campus. The resulting partnership came up with both posters and

stickers which could be placed on lockers throughout campus, advising students against storing their valuables in their lockers and to report witnessing suspicious behaviour to Security Services.

The new McGill IDs will now have essential emergency contact information on the back of the cards so that students, faculty, and staff know who to call during an emergency.

The Community Relations Unit worked with Physical Security Systems to update the CCTV protocol and to create an online form designed to better streamline our process for footage requests by authorized individuals.

This year, Macdonald campus saw the installation of a new pay display parking machine in the Horticulture car park. The upgrade from the old pay and display that required coins to the new system was to provide various payment options, such as debit, credit, and cash.

The campus has an agreement with the City of Montreal that gives our patrollers the authorization to issue city parking tickets for vehicles that park on McGill property and do not display a valid parking permit, and as we move forward with technology, the patrollers now issue e-tickets, replacing handwritten infractions.

Continuing efforts to provide a safe campus for pedestrians, the Security Services unit at MAC recently had a second Rapid Flash Bar installed at the crosswalk from Eco Residence to Macdonald-Stewart. This signalling system enhances safety and reduces the risk of accidents between vehicles and pedestrians by increasing driver awareness and compliance when it comes to yielding to pedestrians at crosswalks and other crossings.

### **Emergency Management & Preparedness (EMP)**

In October 2018, a full-scale emergency simulation was conducted, simulating a vehicle-ramming and active assailant incident at upper residences. As part of the University Emergency Reponses Plan, EMP is mandated to organize a full scale exercise every three years. This exercise involved roughly 150 individuals participating in various roles, including the Service de Police de la Ville de Montréal, Urgence Santé, and actors from the Collège Ahunatic police technology program. The emergency simulation exercised all levels of McGill's emergency response structure, which consists of the on-site response, emergency operations center, emergency communications, and the policy group. The simulation helped to identify areas for improvement and recommended actions to strengthen future emergency responses.

In addition, EMP conducted several other training exercises that included four table top exercises and one emergency response drill, and, in conjunction with Security Services, provided training to the McGill Daycare staff on confinement procedures, where the staff had the opportunity to rehearse what they had just learned.

EMP acquired AlertGo, an emergency response application which promotes easier and more effective communication between responders during emergency incidents. The application is currently being used by McGill Emergency Responders and will be available to the Emergency Operations Center (EOC) early in the fiscal year of 2019-2020.

The Emergency Notification Working Group completed the ENS protocol in December 2018, guiding the activation and use of the multimodal system.

EMP launched *Emergency Management 101*, a short session, available to all community members, that covers key emergency procedures, preparedness tips, and roles and responsibilities. The first session was presented in October 2018.

The EMP team streamlined the following processes at Macdonald campus: construction project reviews, hoist operations, and special event applications.

The Strategic Plan for 2019-2021 was completed and will serve to guide the development of McGill's emergency management program to ensure alignment with industry standards and the continued development of the University's Emergency Management Program by focusing priorities on promoting a safer, less vulnerable university community with the capacity to cope with and manage hazards and risks.

### **Fire Prevention**

The department's three-year strategic/operational plan is based on the Balanced Scorecard approach. The objectives are quantifiable through metrics measured quarterly or yearly.

TOIC (Tyco/Onyx Implementation Command) is the working group assigned to oversee the execution of the ONYX Intelligence Fire Alarm Control Panels (O-IFACP) upgrade, which includes planning, financial

processes, coordinating with stakeholders, revising estimates, integrating departmental processes with the new technology, facilitating equipment training, etc.

Of six service contracts managed by the EMP team, including ONYX installation, four are expected to be signed by end of Q2 2019. The remaining two are expected to receive approval for renewal by Q3 2019.

The Office of Students with Disabilities gave the green light to our revamped Persons with Disabilities website.

With regards to residences, fire safety systems were upgraded at New Residences Hall, Douglas Hall, McConnell Hall, Molson Hall, and Gardner Hall. In addition, over 200 floor fellows and night stewards were trained in emergency evacuation procedures.

The fire systems at the Macdonald-Stewart Complex and the New Power House were upgraded.

## **9 THE YEAR MOVING FORWARD**

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### **9.1 Environmental Health and Safety**

#### **9.1.1 Environmental Health & Safety**

The implementation of the new lab identification cards was in the testing phase at year-end and should be fully in place in the coming year. Similarly, the biohazard module is also in production.

It is anticipated that the new Containment Level 3 laboratory in the Life Science Complex will open this year. The unit will be operated by CMARC but the Biosafety Officer duties will fall on one of the EHS Biosafety Officers.

Another project will be to develop an on-line training video for WHMIS in order to meet the high level of demand.

This coming year, there will also be continued work on implementing the action plan to meet the requirements of the Internal Audits. The new information management system expected to replace the HEAT service call system should address the audit issues related to call tickets and incident tracking, and it is expected that HR will replace the course registration system (with a system TBA) at the same time as R2R comes on line in 2020.

EHS will expand its capacity to be able to also fit-test "N-95" respirators. This will be useful in the event of another influenza pandemic and the need to fit first responders, and will also enable EHS to help Student Services in the fit-testing of medical and nursing students.

Further to a recommendation from the University Laboratory Safety Committee, EHS will be hiring a Laser Safety Officer to handle the growing number of high powered research lasers in use at McGill. Duties will include inspection and training.

After 35 years of service, the Director of EHS will be retiring. A reorganization plan is in place and the process of transferring his various duties, responsibilities, records, and institutional knowledge are in progress.

#### **9.1.2 Hazardous Waste Management**

HWM will proceed with the Biomedical Waste Sterilization System (BWSS), our goal is to purchase the equipment, determine which infrastructure modifications are required to install the BWSS, and have the system installed by September 2020.

HWM plans to ship radioactive waste to Canadian Nuclear Laboratories (CNL) in Chalk River, Ontario by the end of the fiscal year. This operation is performed approximately every five years, with the last shipment having been dispatched in April 2015.

### **9.2 Campus Public Safety**

An analysis of the organizational structure of Facilities Management and Ancillary Services (FMAS) was conducted and a subsequent announcement was made in late June 2019, leading to changes in the structure at Campus Public Safety. Because of similarities in our operating models and goals, Security Services, Fire Prevention, Parking & Transportation Services, and Emergency Management & Preparedness will once again be joined by Environmental Health & Safety and Hazardous Waste Management, and all will report directly to Pierre Barbarie, Director of Campus Public Safety.

### 9.2.1 Emergency Management & Preparedness

EMP is looking into the long-term needs of the emergency notification system and its different vehicles. Also to be addressed is the identification of a solution (a “dashboard”) for a single activation that would simultaneously trigger all of the emergency notification vehicles.

EMP, along with the Terminology Working Group, is working to provide definitions to the Emergency Operations Centre and Policy Group to ensure cohesion and standardization.

EMP is in the development stage of a process and template that would provide academic and administrative units with emergency plans. This project is in the early stages and aims to further enhance the overall preparedness and resiliency of the University.

In terms of training, EMP will continue to organize exercises and training sessions throughout the year. Plans are to increase the number of exercises provided to the Emergency Communications group in order to further develop their skills during an emergency. In addition, further exercises and training sessions will be provided to McGill Daycare staff in order to teach them how to be ready to activate their emergency plans when warranted.

The AlertGo App will be further developed to include other members of the University Emergency Response Plan, such as Emergency Communications and specific event emergency plan members such as Convocation Emergency Plan.

Emergency Management & Preparedness will establish a working group to develop a McGill-specific Emergency Response Plan template for faculties and departments. This project aims to enhance the university’s emergency response capacity by encouraging faculties and departments to undertake vital planning and preparedness activities.

### 9.2.2 Fire Prevention

Fire Prevention’s goals for the coming year:

**Financial-directed:** 1) streamlining all service contracts in collaboration with Procurement; 2) maintaining financial stewards of University funds through budgeting and forecasting; 3) exercising financial stewardship of expenses related to ONYX and TYCO upgrades; and, 4) integrating metrics in support of strategic planning.

**Customer-dedicated:** 1) advancing the fire prevention program in Residences and at Macdonald campus; 2) replacement of all outdated fire panels and transmitter boxes; 3) improving the safety of persons with disabilities during emergency evacuations; 4) assisting building directors with the recruitment of evacuation team members; and, 5) seeking customer feedback on services.

**Process-oriented:** 1) implementing processes for integrating ONYX technology; 2) measuring metrics; 3) executing a strategic plan; and, 4) providing fire prevention guidance during the Incident Management System implementation.

**Team-focused:** 1) building team bonds through collaboration, activities, celebration of successes, knowledge transfer; 2) monitoring employee engagement; 3) cost-effective and cost-saving opportunities for professional development; and 4) reducing office’s reliance on paper.

### 9.2.3 Security Services

Security Services at Macdonald campus will now report to the Associate Director of Campus Public Safety on an interim basis until an evaluation of the department is conducted in response to the restructuring and the retirement of the supervisor of Campus Security at MAC. The Associate Director of CPS will work from MAC campus one or two days per week until further notice.

In keeping with collaborative efforts this past year between Security Services, IT Services, and Procurement to secure approval and funding for a new Incident Management System, a call for tender (CFT) for the purchase of the IMS software will be launched in the coming year. We are confident that this new system will be a great improvement over HEAT, the software presently in use at both campuses.

Along with the new security services contract with GardaWorld that started June 2019, and following an assault on campus, Senior Administration approved funds allowing Security Services to invest in body armor for security personnel. This translates into security personnel, both downtown and at MAC, having ballistic- and stab-resistant vests by January 1, 2020. The equipment will be managed by the agency, as stipulated in the new contract.

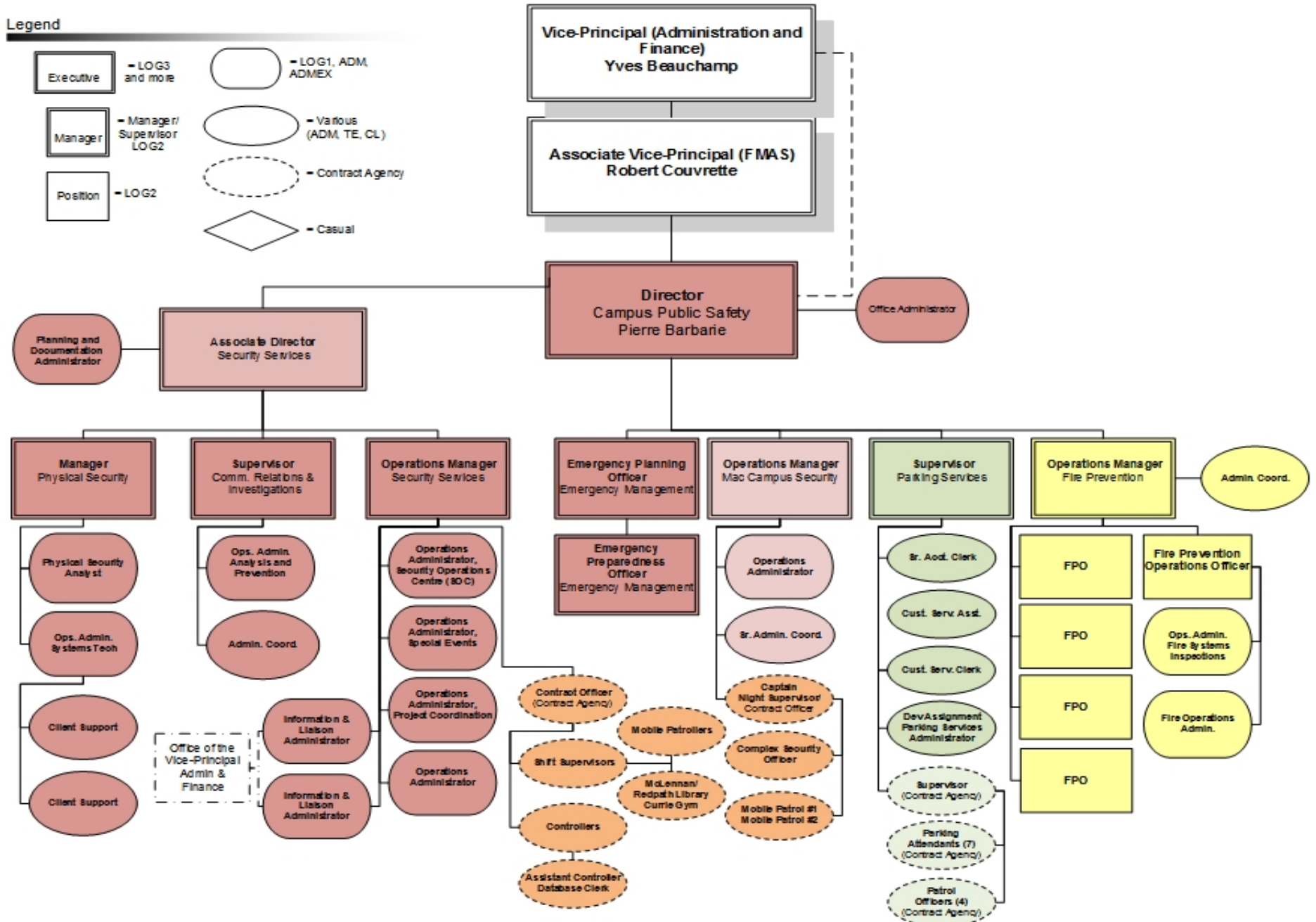
As cited in the highlights portion of this report, Campus Public Safety, in collaboration with key people from several units, has revised the event booking process presently in place at McGill. The final version of the resulting Directive and proposed Policy will be presented at P7 in the coming months. Once approved, the Operations group will begin the next phase of the process, in partnership with Procurement and IT Services, to go to tender for the purchase of the event booking software necessary to manage the newly evolved process.

Physical Security Systems will continue working on reducing the number of blank access cards (BAC) circulating on campus and replacing them with user-restricted cards.

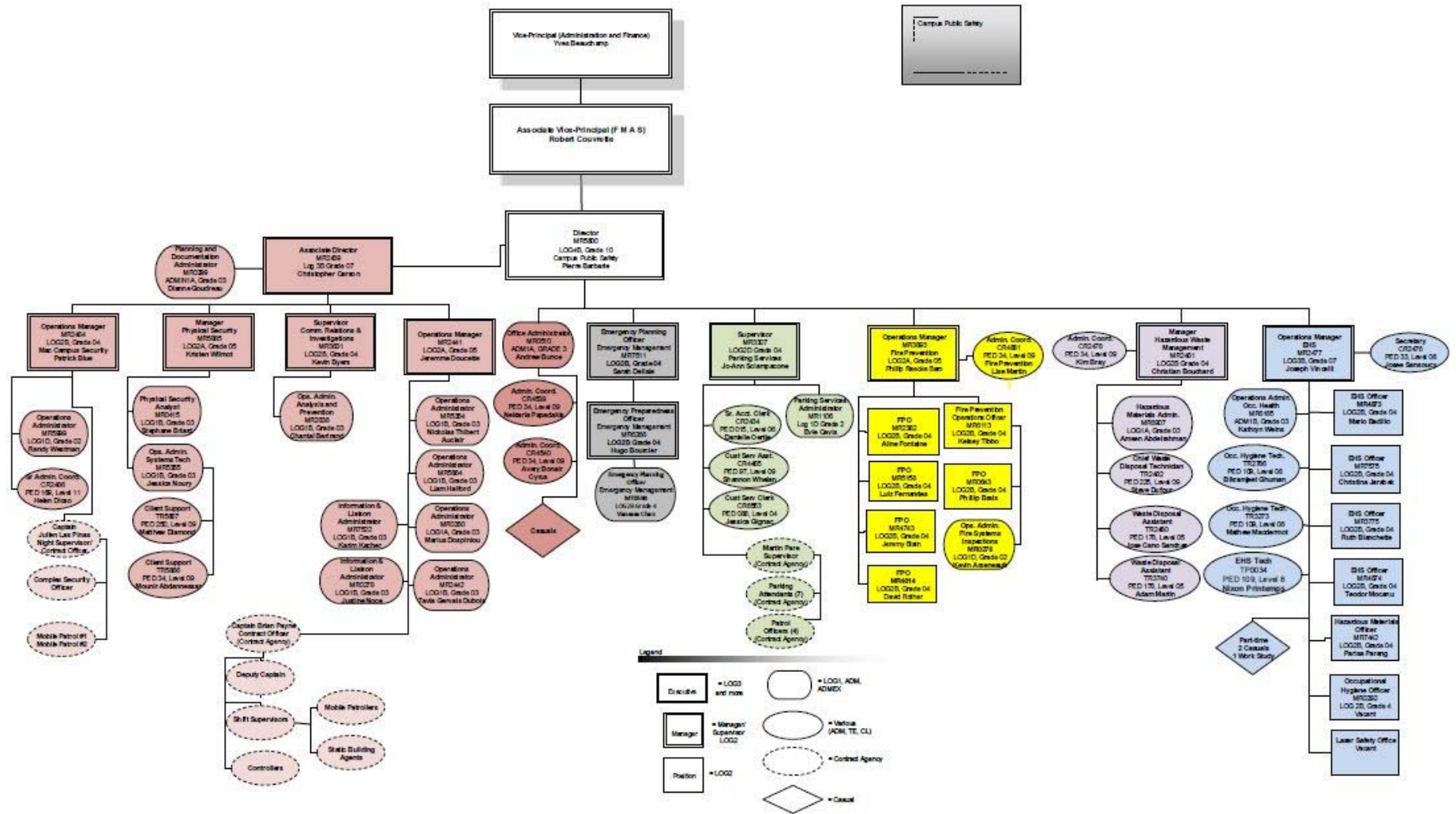
As of June 1<sup>st</sup> 2019, Security Services at Macdonald campus was no longer servicing John Abbott College (JAC). Consequently, the unit will be concentrating all its energy and resources on our community members. With this in mind, we have begun by implementing various new projects:

- a) A new Round Witness system, TrackTik, is in the process of being implemented at our Security Control Centre. The system will also be used for security rounds in strategic areas that require inspection.
- b) As we move forward with technology, in the coming year, we will be able to provide our patrollers with the means to issue electronic or e-tickets, replacing former hand-written contraventions. This will not only simplify the task, but will also have a positive impact on our carbon footprint.
- c) Finally, the training of security personnel in search and rescue practices in order to deal with medical emergencies at the Morgan Arboretum will continue this coming winter, in collaboration with the Arboretum team of ski patrollers. A plan of action for dealing with injuries in a remote area with limited access will be implemented by winter 2020.

APPENDIX 1A ■ CAMPUS PUBLIC SAFETY ORGANIZATIONAL CHART IN EFFECT UNTIL DECEMBER 2019

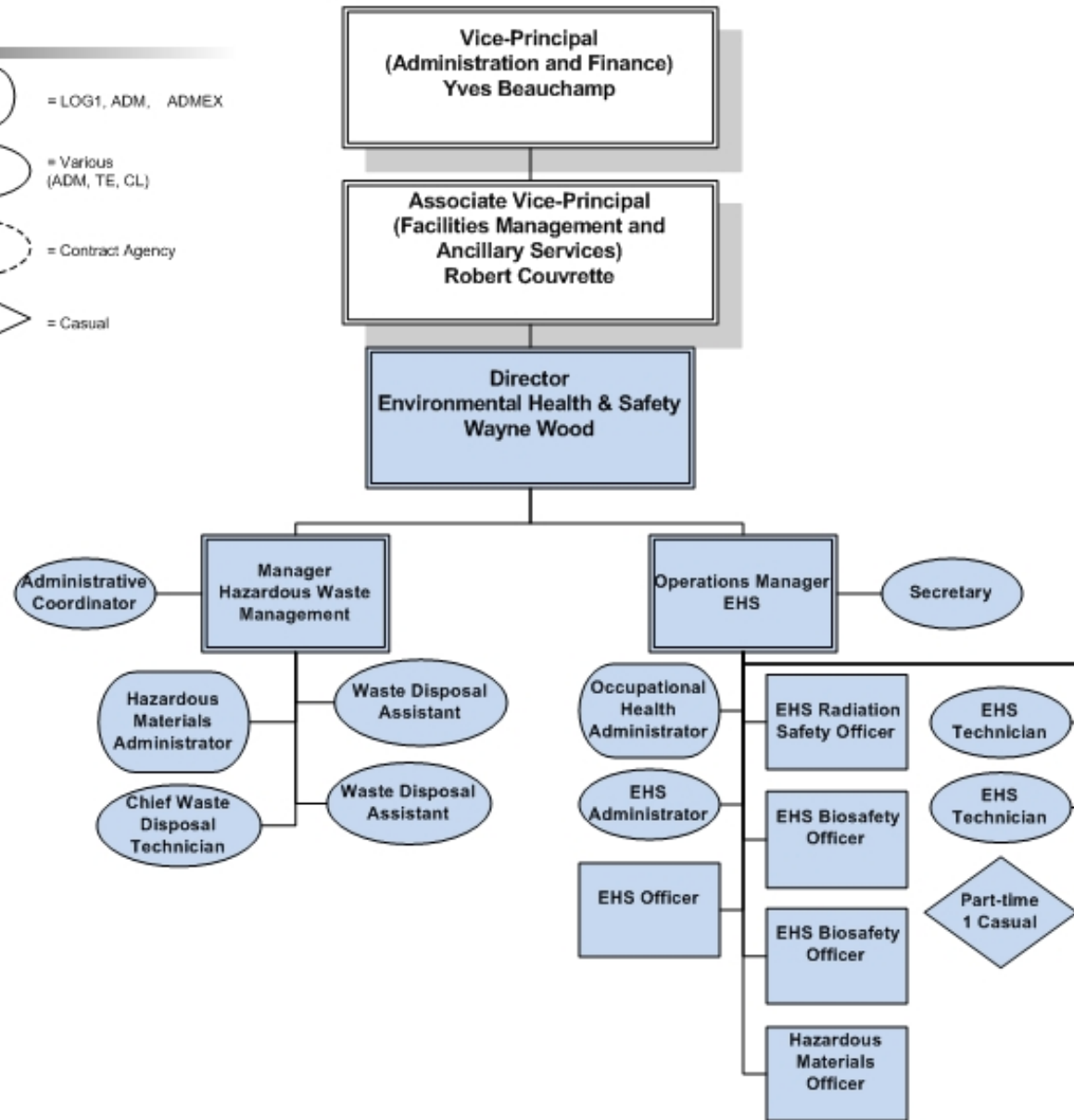
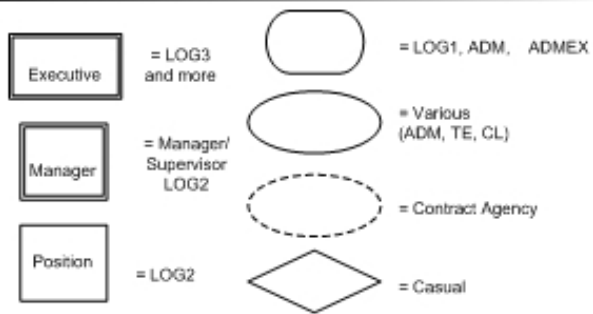


# APPENDIX 1B ■ CAMPUS PUBLIC SAFETY ORGANIZATIONAL CHART AS OF DECEMBER 2019



**APPENDIX 2 ■ ENVIRONMENTAL HEALTH & SAFETY ORGANIZATIONAL CHART IN EFFECT UNTIL DECEMBER 2019**

**Legend**







## LABORATORY SAFETY INSPECTION WORK FORM

Checklist Items	P-F-N/A				Comments
<b>1 GENERAL</b>	<b>Rooms</b>				
<b>Lab Environment</b>					
1110 Evidence of food or drink					<input type="checkbox"/> No food / beverages are permitted <input type="checkbox"/> Equipment used for research not labelled "For experiment only" <input type="checkbox"/> Food used for experimental purposes must be labelled "Not for human consumption"
1120 Laboratory Info Card posted & up-to-date					<input type="checkbox"/> Date: DD-MMM-YY - Lab Info Card more than 3 years old – to update see Comments <input type="checkbox"/> Lab Info Card required – to generate see Comments <input type="checkbox"/> Only McGill numbers noted as emergency numbers <input type="checkbox"/> Handwritten up-dates not permitted - to update see Comments <input type="checkbox"/> Lab Info Card required on all access doors to the laboratory <input type="checkbox"/> Missing hazard symbol for <input type="checkbox"/> Extra hazard symbol for <input type="checkbox"/> Wrong location indicated for paper copies of SDS collection <input type="checkbox"/> Missing containment level <input type="checkbox"/> Missing PPE information <input type="checkbox"/> Other
1140 Room Pressure Gradient					<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Required, but not available <input type="checkbox"/> The lab requires positive pressure
1150 Lab is separated from public areas					<input type="checkbox"/> Lab door not closed <input type="checkbox"/> Lab door not locked and unattended <input type="checkbox"/> Staff present in the laboratory <input type="checkbox"/> Doors to the containment zone are not lockable <input type="checkbox"/> Doors to the containment zone are not kept closed." <input type="checkbox"/> Access to containment zone is not limited to authorized personnel and authorized visitors (card or keyed access, SOP in place, other) <input type="checkbox"/> No screens on windows <input type="checkbox"/> No locks on windows
1160 Designated area for storage of PPE					<input type="checkbox"/> No hooks or storage area available near exit <input type="checkbox"/> Keep PPE stored away from areas where hazardous materials are stored <input type="checkbox"/> Lab coats stored on chairs <input type="checkbox"/> PPE stored in a non-laboratory setting (i.e. student lounge, office area, lecture rooms) <input type="checkbox"/> Inadequate storage for PPE
1170 Personnel clothing to be stored separately from dedicated PPE					<input type="checkbox"/> Street clothing and lab clothing in contact <input type="checkbox"/> Personal belongings are found in in lab (see additional comments) <input type="checkbox"/> Earbuds, headphones, cell phones found in the same vicinity where hazards are being worked with
1180 Hand washing sink has soap and paper towels					<input type="checkbox"/> No soap <input type="checkbox"/> No paper towels <input type="checkbox"/> No sink available <input type="checkbox"/> Sink located away from exit, SOP required.
1190 Two-way communication system(s) not available inside the containment zone					<input type="checkbox"/> Two-way communication system(s) are not available <input type="checkbox"/> Not applicable



Housekeeping & Furniture						
1210	Floors				<input type="checkbox"/> Floors require maintenance – contact Facilities Call Centre <input type="checkbox"/> Excess supplies - clutter represents a trip and fire hazard <input type="checkbox"/> Discard empty boxes - clutter represents a trip and fire hazard <input type="checkbox"/> Housekeeping requires attention - clutter represents a trip and fire hazard <input type="checkbox"/> Slip/trip hazards	<input type="checkbox"/> Old equipment can be safely disposed of via Hazardous Waste Management - <a href="http://www.mcgill.ca/hwm">www.mcgill.ca/hwm</a> <input type="checkbox"/> ITEM across pedestrian traffic areas <input type="checkbox"/> ITEM obstructing exits <input type="checkbox"/> Clutter <input type="checkbox"/> Floors cannot be easily decontaminated
1220	Shelves				<input type="checkbox"/> 18" clearance required between materials and sprinkler heads <input type="checkbox"/> Relocate ITEM stored high <input type="checkbox"/> Excess supplies - Clutter represents a fire hazard <input type="checkbox"/> Shelves overloaded	<input type="checkbox"/> No shelves <input type="checkbox"/> Objects overhang the shelves <input type="checkbox"/> Shelves sagging <input type="checkbox"/> Heavy objects stored high <input type="checkbox"/> Housekeeping requires attention
1230	Liquids stored above eye level				<input type="checkbox"/> Relocate liquids stored high	<input type="checkbox"/> No shelves
1240	Work surfaces in good condition				<input type="checkbox"/> Bench top surface protectors/absorbent underpad stained - change when soiled <input type="checkbox"/> No work Surfaces <input type="checkbox"/> Damaged bench top – requires repair <input type="checkbox"/> Paperwork must be kept separately from hazardous materials <input type="checkbox"/> Exposed sharps left on work surfaces <input type="checkbox"/> Exposed pipette tips left on work surfaces	<input type="checkbox"/> Remove non-laboratory material from work areas to prevent cross-contamination <input type="checkbox"/> No impermeable work surfaces <input type="checkbox"/> Dedicated paper/computer work areas in the containment zone are not segregated from laboratory work stations. <input type="checkbox"/> Housekeeping requires attention, clutter represents a risk of contamination
1250	Furniture				<input type="checkbox"/> Chair not impermeable	<input type="checkbox"/> Furniture not impermeable
Personal Protective Equipment						
1310	Laboratory coats and proper attire worn				<input type="checkbox"/> Policy: Lab coats required in all areas where hazardous products are handled/stored <input type="checkbox"/> Lab coats not fastened <input type="checkbox"/> Lab coat(s) hung on fume hood valves	<input type="checkbox"/> Shorts/Capri's/skirts worn <input type="checkbox"/> No one available/observed <input type="checkbox"/> Lab personnel at study desks <input type="checkbox"/> Lab coats worn in public areas <input type="checkbox"/> Lab coat sleeves rolled up
1320	Disposable laboratory gloves used				<input type="checkbox"/> Safety gloves not worn <input type="checkbox"/> Safety gloves worn with Bunsen burners <input type="checkbox"/> Lab personnel at study desks <input type="checkbox"/> Used gloves left on workbenches <input type="checkbox"/> Gloves must not be worn outside lab activities <input type="checkbox"/> No one available/observed <input type="checkbox"/> Not required	<input type="checkbox"/> Hands are not washed when gloves are removed <input type="checkbox"/> Gloves not removed and / or hands not washed when exiting the BSC <input type="checkbox"/> Gloves not removed and / or hands not washed when exiting the containment zone



1330	Safety glasses worn (with side-shields)				<input type="checkbox"/> Safety glasses with side-shields required <input type="checkbox"/> UV light requires special safety glasses <input type="checkbox"/> Prescription glasses - no side shields <input type="checkbox"/> No one available/observed	<input type="checkbox"/> Lab personnel at study desks <input type="checkbox"/> Working with class 3b & 4 lasers require special safety glasses – consult McGill’s Laser Safety Manual <input type="checkbox"/> Not required
1340	Appropriate footwear worn (closed)				<input type="checkbox"/> Open footwear prohibited in laboratories <input type="checkbox"/> Open-toed shoes	<input type="checkbox"/> Backless shoes <input type="checkbox"/> High-heeled shoes increase risk of tripping/falling <input type="checkbox"/> No one available/observed
1350	Long hair restrained				<input type="checkbox"/> Long hair not restrained	<input type="checkbox"/> Not applicable
<b>Emergency Measures</b>						
1410	First aid poster available and visible				<input type="checkbox"/> Information available on department’s poster <input type="checkbox"/> Missing poster - must be posted – see Comments for printing instructions <input type="checkbox"/> Wrong information (i.e. location of first aid kit, responders, emergency info, eyewash station, emergency shower)	<input type="checkbox"/> Cold room - not required <input type="checkbox"/> Missing information (i.e. location of first aid kit, responders, emergency info) <input type="checkbox"/> MNI: Not required - follow MNI/MNH General Emergency Procedures <input type="checkbox"/> First Aid training expired
1420	First-aid Kit available, accessible, inspected quarterly				<input type="checkbox"/> None available - required <input type="checkbox"/> Available but not accessible - relocate <input type="checkbox"/> Available and accessible but not properly stocked <input type="checkbox"/> Available and accessible but not inspected quarterly. Last inspected DD-MMM-YY	<input type="checkbox"/> Not present, but found in another laboratory nearby. Location: Room # <input type="checkbox"/> Cold Room: Not required <input type="checkbox"/> Storage Room: Not required
1430	Emergency eyewashes accessible, tested weekly and tagged				<input type="checkbox"/> Last tested DD-MMM-YY - Must be tested weekly <input type="checkbox"/> Not tagged <input type="checkbox"/> Not tested <input type="checkbox"/> Not functioning – contact Facilities Call Centre immediately <input type="checkbox"/> Access obstructed – clear area surrounding eyewash <input type="checkbox"/> Not available in lab or corridor, but required. Ensure the access to an eye wash station is available. <input type="checkbox"/> Located in room:	<input type="checkbox"/> Located in corridor, not tested <input type="checkbox"/> Not required <input type="checkbox"/> It was noted that an emergency eye wash and/or a shower was not available in this laboratory. However, given that this was noted in previous inspections and the problem is now in the hands of McGill senior management, this item has been reported as “NA” (not applicable) rather than deducting points.
1440	Emergency showers accessible, tested and tagged				<input type="checkbox"/> Last tested DD-MMM-YY - Not tested annually, contact Facilities Call Centre <input type="checkbox"/> Not tagged <input type="checkbox"/> Not tested <input type="checkbox"/> Located in corridor <input type="checkbox"/> Located in room: <input type="checkbox"/> Not available in lab or corridor, but required. Ensure the access to an emergency shower is available.	<input type="checkbox"/> Not required <input type="checkbox"/> It was noted that an emergency eye wash and/or a shower was not available in this laboratory. However, given that this was noted in previous inspections and the problem is now in the hands of McGill senior management, this item has been reported as “NA” (not applicable) rather than deducting points.



Checklist Items		P-F-N/A				Comments	
<b>2 CHEMICAL SAFETY</b>		<b>Rooms</b>					
<b>W.H.M.I.S.</b>							
2110	Updated inventory available for all chemicals used and stored				<input type="checkbox"/> Inventory not updated <input type="checkbox"/> myLab not implemented <input type="checkbox"/> Available but incomplete	<input type="checkbox"/> Not required - no WHMIS hazardous products used/stored	
2120	SDS must be accessible to all lab personnel				<input type="checkbox"/> No one available to question <input type="checkbox"/> A computer must be available to access myLab system	<input type="checkbox"/> Lab personnel don't have access to myLab (full or read only)	
2130	Containers and/or bottles properly labelled				<input type="checkbox"/> Only abbreviations permitted are those on the EHS Approved Lab Abbreviations List <input type="checkbox"/> Not approved abbreviations used	<input type="checkbox"/> Unlabelled bottle/container – all containers must be labelled <input type="checkbox"/> Bottle/container label damaged and illegible <input type="checkbox"/> Not required - no WHMIS hazardous products used/stored	
<b>Safety Data Sheet (SDS) Audit</b>		<b>Available (Y/N)</b>				<b>Date DD-MMM-YYYY</b>	
2140	SDS must be available through myLab system to all lab personnel				<input type="checkbox"/> SDS missing for ... <input type="checkbox"/> Complete SDS collection must be available through myLab system	<input type="checkbox"/> Not required - no WHMIS controlled products used/stored	
2150	WHMIS Training Up-to-date				<input type="checkbox"/> EHS has no record of WHMIS training for:	<input type="checkbox"/> WHMIS Training must be refreshed every 3 years	



Chemical Storage & Fume Hood						
2210	Chemical stored in the appropriate place				<input type="checkbox"/> Chemicals stored in unidentified cabinets – request labels at ehs@mcgill.ca <input type="checkbox"/> Flammables not stored in a flammable storage cabinet <input type="checkbox"/> Corrosives not stored in a dedicated corrosives cabinet <input type="checkbox"/> Chemicals stored under sink (except bleach and compatible cleaning agents) <input type="checkbox"/> Flammables stored in a domestic refrigerator	<input type="checkbox"/> Chemicals stored in the fume hood will affect the hood's efficiency <input type="checkbox"/> Excessive quantities of supplies on hand - stock-piling is hazardous, reduce quantities on-hand <input type="checkbox"/> Chemicals stored on floor <input type="checkbox"/> Chemicals not stored in identified cabinets <input type="checkbox"/> No chemicals stored <input type="checkbox"/>
2220	Chemical segregation according to compatibility				<input type="checkbox"/> Acids and bases stored together <input type="checkbox"/> Acids or oxidizers and flammables stored together <input type="checkbox"/> Corrosives and flammables stored together	<input type="checkbox"/> Oxidizing and organic acids stored together <input type="checkbox"/> No chemicals stored or only one kept
2230	Gas cylinders				<input type="checkbox"/> Gas cylinders, full or empty, must be secured to a structural component <input type="checkbox"/> Inadequately secured - please ensure straps are tightened <input type="checkbox"/> Inadequately secured - please secured at 3/4 height of cylinder <input type="checkbox"/> Gas cylinders must be stored with protective cap when not in use <input type="checkbox"/> Lab coats and other items must not be placed on gas cylinders <input type="checkbox"/> Relocate cylinders placed behind door	<input type="checkbox"/> Excessive quantities - stock-piling gas cylinders is hazardous, reduce quantities on-hand <input type="checkbox"/> Cylinders placed near sources of heat <input type="checkbox"/> Cloth straps used, however chains are preferred for fire safety <input type="checkbox"/> Incompatible gases stored together <input type="checkbox"/> None found/used
2240	Expiry date for chemicals				<input type="checkbox"/> Ether (diethyl ether, ethyl ether) <input type="checkbox"/> Isopropyl ether <input type="checkbox"/> Cyclohexene <input type="checkbox"/> Furan <input type="checkbox"/> Dicyclopentadiene	<input type="checkbox"/> THF (Tetrahydrofuran) <input type="checkbox"/> Dioxane <input type="checkbox"/> Picric Acid <input type="checkbox"/> None found/used
2250	Fume Hood Inspection				<input type="checkbox"/> Refer to Chemical Fume Hood Inspection Report <input type="checkbox"/> Shared chemical fume hood. Report sent to:	<input type="checkbox"/> Not available <input type="checkbox"/> No fume hood available and required for chemicals being worked with
2260	Water Reactive chemicals				<input type="checkbox"/> Stored near source of water (i.e. plumbing, fire sprinklers, water baths)	<input type="checkbox"/> Container not kept closed <input type="checkbox"/> Sodium, Potassium, Lithium, Magnesium



Chemical Waste						
2310	Appropriate waste containers used				<input type="checkbox"/> 20-L solvent container <input type="checkbox"/> 20-L corrosives container <input type="checkbox"/> Small bottles <input type="checkbox"/> Waste containers over-filled <input type="checkbox"/> Wrong type of container used	<input type="checkbox"/> Waste disposed in room .... <input type="checkbox"/> None found – discard hazardous waste as per McGill’s disposal guidelines
2320	Waste containers properly labelled				<input type="checkbox"/> Waste container tags not properly filled <input type="checkbox"/> Waste container tags filled using chemical formulas <input type="checkbox"/> Waste container tags filled using chemical abbreviation <input type="checkbox"/> Smaller container used – name of PI missing <input type="checkbox"/> Smaller container used – original label visible	<input type="checkbox"/> Vacuum flasks must be labelled “Waste” <input type="checkbox"/> Vacuum flasks stored on the floor must be kept in secondary container <input type="checkbox"/> None found - discard hazardous waste as per McGill’s disposal guidelines
2330	Waste containers stored in appropriate location				<input type="checkbox"/> Waste containers stored in fume hood will affect hood efficiency <input type="checkbox"/> Waste containers not kept closed when not in use	<input type="checkbox"/> Waste containers stored in traffic areas (slip/falls risk) <input type="checkbox"/> None found – discard hazardous waste as per McGill’s disposal guidelines
2340	Garbage free of sharps & hazardous waste				<input type="checkbox"/> Pipette tips found in regular garbage - practice prohibited. <input type="checkbox"/> Glass chemical bottles found in regular garbage	<input type="checkbox"/> Glass chemical bottles found in broken glass boxes/recycling bins <input type="checkbox"/> No waste generated
2350	Sharps containers available and properly labelled				<input type="checkbox"/> Container not properly identified <input type="checkbox"/> Sharps found in the regular garbage <input type="checkbox"/> Sharps NOT collected in a CSA-approved sharps container <input type="checkbox"/> Sharps container not clearly labelled - original label visible <input type="checkbox"/> Pipette tips not collected in a puncture proof container	<input type="checkbox"/> Non-biohazardous sharps collected in a container that has a biohazards symbol <input type="checkbox"/> Sharps containers over-filled <input type="checkbox"/> No sharps generated <input type="checkbox"/> Sharps container not clearly labelled “SHARPS” <input type="checkbox"/> Sharps lying on workbenches <input type="checkbox"/> None found – Dispose of non-contaminated sharps in clearly labelled SHARPS containers
2360	Hazardous Waste Disposal training				<input type="checkbox"/> EHS has no record of Hazardous Waste Disposal training for:	<input type="checkbox"/> Hazardous Waste Disposal Training must be refreshed every 3 years



Checklist Items		P-F-N/A				Comments	
<b>3 BIOSAFETY</b>		<b>Rooms</b>					
<b>General Requirements</b>							
3110	Biohazardous inventory available and storage location is secure with appropriate signage				<input type="checkbox"/> No signage/biohazardous stickers <input type="checkbox"/> Biohazards stored in unlocked freezer outside the containment zone	<input type="checkbox"/> Biohazards stored in unlabelled freezer outside the containment zone	
3120	Biohazardous inventory audit				<input type="checkbox"/> Inventory incomplete	<input type="checkbox"/> Missing location <input type="checkbox"/> Missing risk group <input type="checkbox"/> Inventory not available	
3130	Personnel received Biosafety training				<input type="checkbox"/> Introduction to Biosafety training not taken / expired <input type="checkbox"/> BSC training not taken / expired if applicable <input type="checkbox"/> No internal training SOP available	<input type="checkbox"/> Laboratory training documents not available <input type="checkbox"/> Laboratory training documents incomplete (see additional comments)	
3140	Equipment Standard operating procedures involving Biohazardous Materials are not available for:				<input type="checkbox"/> Centrifuge <input type="checkbox"/> Blender <input type="checkbox"/> Sonicator <input type="checkbox"/> Homogenizer <input type="checkbox"/> Other (see additional comments)	<input type="checkbox"/> Shaking incubator <input type="checkbox"/> Mixer <input type="checkbox"/> Cell sorter <input type="checkbox"/> Autoclave <input type="checkbox"/> BSC <input type="checkbox"/> Not applicable	
3150	Standard Operating Procedure (SOP) Audit - Contents of 1 SOP review for compliance with the Canadian Biosafety Standard				<input type="checkbox"/> Biosafety risks not identified <input type="checkbox"/> Biosecurity risks not identified <input type="checkbox"/> Maintenance not included in SOP <input type="checkbox"/> Good microbiological procedures not employed (see additional comments) <input type="checkbox"/> Not available	<input type="checkbox"/> Training requirements not specified <input type="checkbox"/> Movement of biohazardous materials not described <input type="checkbox"/> Traffic flow from clean to dirty not described <input type="checkbox"/> Personal protective equipment not listed in SOP	
3160	Documentation review				<input type="checkbox"/> Training needs assessment not available <input type="checkbox"/> Maintenance records not up to date <input type="checkbox"/> Autoclave not validated	<input type="checkbox"/> No record of visual inspection of the containment zone by lab personnel <input type="checkbox"/> Validation documentation not kept up to date <input type="checkbox"/> Not applicable	
3170	Application to Biohazardous Materials is kept on file and information is current				<input type="checkbox"/> No permit available <input type="checkbox"/> Permit not amended within the past year	<input type="checkbox"/> Not applicable	
<b>Biological Safety Cabinets (BSCs)</b>							
3210	BSCs certified annually				<input type="checkbox"/> BSC not certified <input type="checkbox"/> Expired certification	<input type="checkbox"/> Certification sticker not visible	
3220	Work surface and shield clean				<input type="checkbox"/> Unclean work surface	<input type="checkbox"/> Unclean shield	
3230	Proper procedures followed when working in BSCs				<input type="checkbox"/> PPE not worn while working in BSC <input type="checkbox"/> Front grill covered	<input type="checkbox"/> Workflow does not follow from clean to dirty <input type="checkbox"/> No waste container available	



3240	No open flames used in BSCs				<input type="checkbox"/> Bunsen burner found inside BSC	<input type="checkbox"/> Use of open flame in BSC
3250	No permanent storage of materials in BSC				<input type="checkbox"/> Storage of materials in BSC	<input type="checkbox"/>
3260	BSCs located as to minimize disruption of the intake air curtain				<input type="checkbox"/> BSC next to door <input type="checkbox"/> BSC placed under HVAC supply/exhaust <input type="checkbox"/> BSC facing chemical fume hood <input type="checkbox"/> BSC facing another BSC	<input type="checkbox"/> BSC in high traffic area <input type="checkbox"/> Note: If an SOP is in place to mitigate these risks the lab receives a pass (must be documented). SOP title:
3270	Other containment devices present designed and used in a manner to prevent the release of biohazardous materials				<input type="checkbox"/> No rotor cups for centrifuge <input type="checkbox"/> No gasket seal on blender <input type="checkbox"/> Not applicable	<input type="checkbox"/> Other (see additional comments)
3280	Vacuum systems equipped with an in-line filter				<input type="checkbox"/> No filter <input type="checkbox"/> 0.45 micron filter used	<input type="checkbox"/> No record of visual inspection of the filter <input type="checkbox"/> No record of replacing filter
<b>Biohazardous Waste</b>						
3310	Biohazardous waste is placed in properly labeled containers, liquid waste placed in leak-proof unbreakable containers				<input type="checkbox"/> Proper autoclavable bags not used <input type="checkbox"/> Biohazardous boxes overfilled <input type="checkbox"/> Biohazardous waste found in regular garbage <input type="checkbox"/> Biohazardous waste container not labelled	<input type="checkbox"/> Liquid waste not decontaminated prior to disposal <input type="checkbox"/> No double bagging of waste in incineration boxes next to BSC <input type="checkbox"/> Name of PI missing
3320	Biohazardous sharps containers available and properly labelled				<input type="checkbox"/> Biohazardous sharps container not clearly labelled "BIOHAZARDOUS SHARPS" <input type="checkbox"/> Biohazardous sharps found in the regular garbage <input type="checkbox"/> Biohazardous sharps NOT collected in a CSA-approved sharps container <input type="checkbox"/> Biohazardous pipette tips not collected in a puncture proof container	<input type="checkbox"/> Biohazardous sharps container not clearly labelled - original label visible <input type="checkbox"/> Biohazardous sharps containers disposed of via the regular garbage <input type="checkbox"/> Biohazardous sharps containers over-filled <input type="checkbox"/> No biohazardous sharps generated <input type="checkbox"/> None found
3330	Disinfectants against agents in use are available				<input type="checkbox"/> Disinfectants not available <input type="checkbox"/> Ethanol used but wrong concentration (over 85%) <input type="checkbox"/> No expiry date on chemicals with a defined shelf-life	<input type="checkbox"/> Expired disinfectants (see additional comments) <input type="checkbox"/> Neutralization agents not available for toxins <input type="checkbox"/> Validation of disinfectant is not available
3340	Monitoring of autoclaves with biological indicators done regularly and records kept on file				<input type="checkbox"/> Waste is incinerated <input type="checkbox"/> Biological Indicators not used <input type="checkbox"/> Lot number of biological indicators not documented	<input type="checkbox"/> Testing logs not kept on file <input type="checkbox"/> Where recording devices are provided cycle, parameters are not monitored
3350	Records of autoclave cycle logs (time, pressure and temp.) kept on file				<input type="checkbox"/> Waste is incinerated <input type="checkbox"/> Missing information	<input type="checkbox"/> Cycle logs not kept on file.





Checklist Items		P-F-N/A			Comments	
<b>4 RADIATION</b>		<b>Rooms</b>				
<b>General Requirements</b>						
4110	Radiation warning signs posted (door, hood, ref. etc.)				<input type="checkbox"/> Not on fumehood/bench <input type="checkbox"/> No warning sign at lab entry <input type="checkbox"/> Frivolous posting	<input type="checkbox"/> Not on dedicated equipment <input type="checkbox"/> Not on radioisotope storage area
4120	CNSC, Internal Permit posted				<input type="checkbox"/> Internal permit not posted <input type="checkbox"/> Internal permit not updated	<input type="checkbox"/> CNSC Class poster not posted
4130	Log Book present				<input type="checkbox"/> Logbook not kept near working area <input type="checkbox"/> Logbook damaged/full: contact EHS for replacement	
4140	Staff & student Radiation Safety Training				<input type="checkbox"/> Untrained personnel handling radioactive material <input type="checkbox"/> Personnel require refresher course every 3 years	
4150	Previous deficiencies adequately resolved				<input type="checkbox"/> Previous deficiency not resolved. See point ..... from previous inspection.	
<b>Contamination and Monitoring</b>						
4210	Wipe test and LSC				<input type="checkbox"/> Wipe test frequency not done in accordance with RSM. Must be within five days after radioisotope handling. <input type="checkbox"/> Decontamination not done after contamination is found <input type="checkbox"/> Wipe test not done after decontamination <input type="checkbox"/> Wipe test logs not kept in logbook or companion binder	
4220	Contamination				<input type="checkbox"/> Contamination found at sample location ..... See attached wipe test results. Decontamination should be done immediately.	
4230	Survey instrument available, calibrated & functioning				<input type="checkbox"/> No instrument available <input type="checkbox"/> Instrument not calibrated within the last year.	<input type="checkbox"/> Not functioning/broken <input type="checkbox"/> Batteries dead/not found <input type="checkbox"/> Inappropriate instrument type
4240	Thyroid monitoring				<input type="checkbox"/> Personnel Condition 1 not respected. (see internal permit)	
4250	Personnel monitoring utilized (TLD)				<input type="checkbox"/> Personnel Condition 2 not respected. (see internal permit) <input type="checkbox"/> Personnel Condition 3 not respected. (see internal permit) <input type="checkbox"/> Dosimeter reports not accessible to all users	
<b>Radioisotope and Waste</b>						
4310	Radioisotope physical inventory (vials identified)				<input type="checkbox"/> Vial missing myLab I.D. # <input type="checkbox"/> Vial missing: I.D. ....	
4320	Radioisotope inventory updated (myLab)				<input type="checkbox"/> Vial info not entered into myLab <input type="checkbox"/> Vial usage(s) not recorded in myLab. <input type="checkbox"/> Vial disposal not recorded in myLab.	
4330	Radioisotope storage and security adequate				<input type="checkbox"/> Radioactive material not stored in an appropriate place <input type="checkbox"/> Radioactive material not secured (accessible to unauthorized personnel) <input type="checkbox"/> Radioactive material not adequately shielded.	
4340	Radioactive waste stored and labelled properly				<input type="checkbox"/> Radioactive waste not adequately shielded <input type="checkbox"/> Waste container not labelled properly <input type="checkbox"/> Inappropriate use of waste containers (i.e. Liquid, Solid, and 1L) <input type="checkbox"/> Waste container not "opened" in myLab <input type="checkbox"/> Waste container "closed" in myLab was not brought to waste room for pickup	



Radioisotope	Open or sealed	Stored in	Used in	Comments

## APPENDIX 4 ■ FIRE EQUIPMENT UPGRADES PROGRAM

### Residences

Building Name	Bldg #	Fire Alarm System	Alarm Transmitter Box	IP Connectivity
Molson Hall	116	Completed 2019	Planned 2019	Completed 2019
Carrefour Sherbrooke	121	Planned 2020	Planned 2019	Planned 2020
Douglas Hall	125	Completed 2018	Planned 2019	Completed 2019
Gardner Hall	133	Completed 2019	Planned 2019	Completed 2019
Bishop Mountain Hall	134	Completed 2019	Planned 2019	Completed 2019
Solin Hall	146	Planned 2020	Planned 2019	Planned 2020
Royal Victoria College Residence	180	Completed 2019	Planned 2019	Completed 2019
McConnell Hall	221	Completed 2019	Planned 2019	Completed 2019
New Residence Hall	244	Completed 2019	Planned 2019	Completed 2019
University Hall Residence	251	Planned 2020	Planned 2019	Planned 2020
La Citadelle	252	Planned 2020	Planned 2019	Planned 2020
Laird Hall	440	Planned 2020	Planned 2019	Planned 2020
Eco Residences	495, 496	Completed 2018	Planned 2019	Completed 2019

### Downtown Campus

Building Name	Bldg #	Fire Alarm System	Alarm Transmitter Box	IP Connectivity
Molson Stadium	106	Completed 2017	Planned 2019	Completed 2019
McLennan / Redpath Library	108, 178	Planned 2019	Planned 2019	Planned 2019
Burnside Hall	110	Planned 2019	Planned 2019	Planned 2019
Maass Chemistry	119	Planned 2020	Planned 2019	Planned 2020
Chancellor Day Hall / Gelber Law Library	122, 231	Planned 2020	Planned 2019	Planned 2020
Macdonald Engineering	130	Planned 2020	Planned 2019	Planned 2020
McConnell Engineering	131	Planned 2020	Planned 2019	Planned 2020
Peel Daycare / 3495 / 3487 / 3483 Peel	138, 145, 187, 213	Planned 2019	Planned 2019	Planned 2019
Currie Gym	139	Completed 2017	Planned 2019	Completed 2019
McIntyre Medical	155	Planned 2019	Planned 2019	Completed 2019
Rabinovitch House	161	Planned 2019	Planned 2019	Completed 2019
Education	168	Planned 2019	Planned 2019	Completed 2019
Duff Medical	169	Planned 2019	Planned 2019	Completed 2019
University Centre – SSMU	172	Planned 2019	Planned 2019	Completed 2018
Armstrong Building	185	Completed 2018	Completed 2018	Completed 2018
Rutherford Physics	189	Planned 2019	Planned 2019	Completed 2019
3610 McTavish	214	Completed 2019	Planned 2019	Completed 2018
3641 University	216	Completed 2018	Planned 2019	Planned 2019

Wong	229	Planned 2019	Planned 2019	Completed 2019
Genome	239	Planned 2019	Planned 2019	Completed 2019
Trottier	240	Planned 2020	Planned 2019	Completed 2019
Life Sciences Complex	241	Completed 2019	Planned 2019	Completed 2019
688 Sherbrooke	233	Not required	Completed 2018	Completed 2018
Durocher 3465	249	Completed 2018	Planned 2019	Planned 2019

### Macdonald Campus

<b>Building Name</b>	<b>Bldg #</b>	<b>Fire Alarm System</b>	<b>Alarm Transmitter Box</b>	<b>IP Connectivity</b>
Macdonald-Stewart Complex / Raymond / Barton	405, 446, 485	Completed 2019	Planned 2019	Completed 2019
LODS Seed Farm	444	Planned 2019	Planned 2019	Planned 2019
Macdonald Daycare	447	Planned 2019	Planned 2019	Planned 2019
Parasitology	467	Planned 2019	Planned 2019	Planned 2019
New Power House	521	Completed 2018	Completed 2018	Completed 2018